



# California Regional Water Quality Control Board

## San Francisco Bay Region



Terry Tamminen  
Secretary for  
Environmental  
Protection

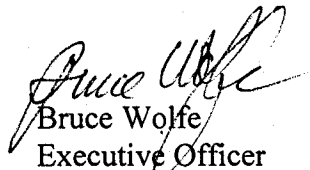
1515 Clay Street, Suite 1400, Oakland, California 94612  
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<http://www.swrcb.ca.gov/rwqcb2>

Arnold  
Schwarzenegger  
Governor

TO: Interested Persons  
(see list attached)

By E-Mail & Regular Mail

FROM:

  
Bruce Wolfe  
Executive Officer

File No. 41S0002 (SIM)

**SAN FRANCISCO BAY  
REGIONAL WATER QUALITY CONTROL BOARD**

DATE:

NOV 03 2004

SUBJECT: Adopted Resolution R2-2004-0087  
**AUTHORIZING THE EXECUTIVE OFFICER TO ENTER INTO AN  
AGREEMENT FOR MUTUAL RELEASE AND COVENANT NOT TO  
SUE WITH 301 INDUSTRIAL LLC FOR PROPERTY LOCATED AT 301  
INDUSTRIAL WAY IN THE CITY OF SAN CARLOS, SAN MATEO  
COUNTY, CALIFORNIA**

Attached is the Resolution (with an attachment and exhibits) adopted at the Regional Board meeting of October 20<sup>th</sup>. The Resolution authorized the Executive Officer to complete the Mutual Release (aka Prospective Purchaser Agreement) with 301 Industrial LLC.

If you have questions, please contact Steve Morse (tel: 510-622-2393; e-mail: [sim@rb2.swrcb.ca.gov](mailto:sim@rb2.swrcb.ca.gov)).

Attachments:

Interested Persons List

Resolution No. R2-2004-0087

Attachment: Mutual Release and Covenant Not to Sue

Exhibit A. Property Legal Description

Exhibit B. Approval Letter for Remedial Action Plan and Addendum  
Remedial Action Plan

Addendum to Remedial Action Plan

Exhibit C. Written Instrument of Release and Transfer Document

# Interested Persons List

301 Industrial LLC

Adopted Resolution R2-2004-0087 October 20, 2004

Alan Leavitt, P.E.  
301 Industrial LLC  
c/o Northgate Environmental Management Inc.  
3629 Grand Avenue  
Oakland, CA 94610

Stephen W. Lavinger, Chief  
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Mr. Jack Whorowski  
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San Carlos, CA 94070

Lynn Nakashima  
Northern California – Coastal Cleanup  
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Cecilia Montalvo  
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AIG Consultants, Inc.  
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Patrick Ledesma  
San Mateo County  
Environmental Health Services Division  
455 County Center  
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700 Heinz, Suite 200  
Berkeley, California 94710

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**RESOLUTION No. R2-2004-0087**

**AUTHORIZING THE EXECUTIVE OFFICER TO ENTER INTO AN AGREEMENT FOR MUTUAL RELEASE AND COVENANT NOT TO SUE WITH 301 INDUSTRIAL LLC FOR PROPERTY LOCATED AT 301 INDUSTRIAL WAY IN THE CITY OF SAN CARLOS, SAN MATEO COUNTY, CALIFORNIA**

**WHEREAS**, the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. **Jurisdiction:** The manufacturing plant is located at 301 Industrial Way in San Carlos, California, comprising approximately 18.5 acres (the Property). The Property is more accurately described in the legal description (Exhibit A to the Mutual Release Attachment). The Board has authority as a state regulatory agency under the California Water Code to oversee site cleanup for the residual pollutants and contaminants found on the Property.
2. **Site Investigations:** Investigations have shown that the Property was historically marshland that was filled and developed for industrial use in the 1950's. Recent soil and groundwater testing of the Property shows that while it contains detectable concentrations of a number of regulated chemical compounds, including PCBs, volatile organic compounds, and heavy metals; its use as an industrial site is not compromised by these compounds. Groundwater is not currently used as a drinking water supply and no such use or need is anticipated for the foreseeable future, as groundwater is brackish due to the proximity of the Bay.
3. **Current Property Situation:** The Property is currently owned by Communications and Power Industries, Inc. ("CPI") and is currently operated as an electronic component manufacturing plant. No other former uses are known. CPI and 301 Industrial Way LLC ("301") have entered into negotiations for 301's purchase of the Property.
4. **Site Redevelopment:** 301 is a California limited liability company. It intends to complete the purchase of the Property on or about November 1, 2006, perform demolition of all site improvements, remediate the Property in accordance with the Remedial Action Plan ("RAP") which is Exhibit B to the Mutual Release Attachment to this Resolution and prepare the Site for unrestricted redevelopment. The current proposed re-use is as a new hospital to serve the people of the greater Bay Area.
5. **Future Actions Under Redevelopment:** Conditioned on the project proceeding, the RAP will guide site remediation activities. Any contaminated soil found on the Property during demolition, grading, or redevelopment will be remediated to Unrestricted Use Standards. "Unrestricted Use" means and includes residential housing, children facilities (e.g., daycare, K-12 schools, preschools, playgrounds), elderly facilities (e.g., nursing homes; hospices; convalescent homes; senior centers; assisted living facilities), places of worship, hotels, motels, hospitals, skilled nursing facilities, medical facilities, and similar sensitive receptors. Any contaminated groundwater encountered in excavations for Property improvements will be handled appropriately as specified in the RAP. Based on

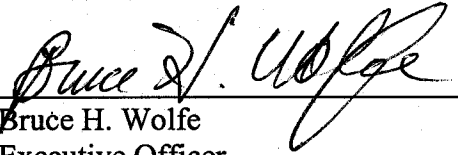
the extent of the investigative work completed at the Property to date and on the remedial approach set forth in the RAP, the post-remediation Property conditions will not create an unacceptable risk to human health or the environment. After the RAP has been successfully implemented, the Board does not expect any further remediation of soil and/or groundwater will be needed nor require engineering and/or institutional controls to allow for Unrestricted Use.

6. **301 Industrial LLC's Request:** 301 seeks a commitment from the Board that approves of the RAP and also that 301 and its members, officers, directors, shareholders, employees, partners, partnerships and partners of such partnerships, representatives, agents, affiliates, tenants, lenders, agents, representatives, and their respective assigns and successors ("Buyer Related Parties") in interest will not be named as dischargers (or responsible parties) in a Board enforcement order with regard to existing known conditions of contamination solely by virtue of purchasing the Property. Specifically, 301 requests that the Board execute a Mutual Release and Covenant Not to Sue ("Mutual Release") with the Buyer Related Parties for the Property based on the RAP. Without this assurance from the Board, 301 states that it will not be able or willing to complete the purchase and redevelopment of the Property.
7. **Board Authority:** Pursuant to Water Code §13304, the Board can enter into agreements whereby the Board covenants not to name prospective purchasers, tenants, lenders, and related parties in enforcement actions for known conditions of contamination. The Board may enter into such agreements if it is sufficiently in the public interest to warrant expending public resources necessary to reach such an agreement.
8. **Benefits of Redevelopment:** The Property is located in an area that is redeveloping to more intense commercial, office, and industrial uses from the former filled marshlands and/or manufacturing uses. Redevelopment of the Property would have economic and social benefits to the local community and to the public at large. The proposed redevelopment will provide about 1450 new permanent jobs with an estimated annual payroll of over \$90,000,000, will utilize existing infrastructure, increase available hospital beds and medical care to the greater Bay Area, and diminish demand upon existing fringe areas.
9. **CEQA:** The purchase of the Property is not an activity that requires Board approval. Furthermore, neither the Property transaction nor the Board's approval of the Mutual Release is a "project" as defined by Public Resources Code Section 21065 and 14 CCR 15378(a) such that the California Environmental Quality Act (CEQA) applies.
10. **Public Notice:** The Board provided notice of its intention to consider this matter at the October 20, 2004 Board meeting and provided an opportunity for interested persons to comment on the draft resolution and its attachments.
11. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this item.

San Francisco Bay Regional Water Quality Control Board  
Attachment to Resolution No. R2-2004-0087

**NOW, THEREFORE BE IT RESOLVED**, that the Board authorizes the Executive Officer to negotiate minor amendments to the draft Mutual Release (Attachment), and to sign and execute the final Mutual Release and any other associated documents.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 20, 2004.

  
\_\_\_\_\_  
Bruce H. Wolfe  
Executive Officer

Attachment – Mutual Release and Covenant Not to Sue

Exhibit A. Property Legal Description

Exhibit B. Approved Remedial Action Plan (RAP) and Addendum

Exhibit C. Written Instrument of Release and Transfer Document

**California Regional Water Quality Control Board  
San Francisco Bay Region**

**Attachment to Resolution No. R2-2004-0087  
Mutual Release and Covenant Not To Sue**

**301 Industrial Way, San Carlos, San Mateo County, California**

**I. Introduction**

This **Mutual Release and Covenant Not to Sue** ("Mutual Release") is provided in response to a request by the prospective purchaser, 301 Industrial LLC ("Buyer"), a California Limited Liability Company and pursuant to San Francisco Bay Regional Water Quality Control Board ("Regional Board", "Board" or "RWQCB") Resolution No. R2-2004-0087 ("Resolution") authorizing its Executive Officer to finalize negotiations and sign the Mutual Release and associated documents concerning the currently operating Communications and Power Industries, Inc. ("CPI") manufacturing site located at 301 Industrial Way, in San Carlos, California ("Property"). The legal description of the Property is attached hereto and incorporated by reference as "Exhibit A."

Buyer desires a commitment, to the maximum extent permitted by law, that it, its parents, subsidiaries, partners, partnerships, affiliates, subsequent purchasers, tenants, lenders, and any occupants of the Property, as well as all of their members, partners, partnerships, shareholders, directors, officers, employees, agents, attorneys, and their respective successors and assigns (individually, "Released Party" and collectively, "Released Parties") will not be subject to liability for, or the subject of any actions, orders, or other liabilities or requirements related to or arising from the "Known Conditions" (defined below).

**II. Definitions**

For purposes of this Mutual Release, "Known Conditions" or "Known Condition" means all conditions of pollution in, at, under, originating from or migrating onto or off of the Property or any portion thereof, that were known to the Regional Board as of the Effective Date (defined below). The phrase "known to the Regional Board" refers to information regarding pollution in, at, under, originating from or migrating onto or off of the Property, or any portion thereof, that was disclosed to the Regional Board or is reasonably discernible from the reports, investigations, workplans, or any other information submitted to the Regional Board prior to the Effective Date. With respect to any claim, cause of action, investigation, or enforcement action asserted or required by the Regional Board, the Released Parties shall bear the burden of proving to the Regional Board that the condition of pollution at, under, or originating from the Property for which the Regional Board is pursuing a claim, cause of action, investigation or enforcement action is a Known Condition.

**III. Findings of Fact**

This Mutual Release is based on the following findings by the Regional Board:

1. The Property is within the jurisdiction of the Regional Board due to the Known Conditions. The Regional Board enters into this Agreement pursuant to California Water Code Sections 13000 et seq. The Regional Board may release and covenant not to sue or assert claims for environmental investigation or remediation or other related claims against prospective purchasers, and related parties, of environmentally impacted properties, especially where, as here, the agreement is sufficiently in the public interest.

San Francisco Bay Regional Water Quality Control Board  
Attachment to Resolution No. R2-2004-0087

2. The Property has been used as an electronics manufacturing facility since the mid-1950s by a number of operators, including CPI, Varian Power Grid Systems, and Eitel-McCullough, Inc. The Property is approximately 18.5 acres in size, is generally flat with an elevation of about 5 feet above MSL. The upper 5 to 10 feet of the site consists of fill overlying historical marshland and Younger Bay Mud. The nearest surface water (Phelps Slough) is located approximately 300 feet to the east, which drains into the Steinberger Slough and then into San Francisco Bay. Depth to groundwater is typically 6 to 10 feet below ground surface. Past and recent soil and groundwater testing of the Property shows that it contains detectable concentrations of a number of regulated chemical compounds, including volatile organic compounds, PCBs, petroleum products, and heavy metals including chromium and nickel. Site groundwater contains total dissolved solids at a level that precludes the beneficial use of drinking water being designated. Previously, the RWQCB and the Department of Toxic Substances Control have determined that existing site conditions are acceptable for industrial use, but that soil and groundwater cleanup is required or anticipated with respect to the on-site Known Conditions if site uses change. Buyer proposes to complete a cleanup of the site as described in the Remedial Action Plan ("RAP") and Addendum filed with the Board and attached hereto as "Exhibit B" and Incorporated by reference to obtain an unrestricted use no further action letter from the Board. Completion of the RAP, as amended by the Addendum, is expected to yield site conditions that are acceptable for unrestricted use without the need for engineering or institutional controls.
3. Remediation steps will include (a) cessation of CPI's operations at the Property; (b) CPI's regulatory closure of all of the regulated units existing at the Property; (c) CPI's move out from the Property; (d) purchase of the Property by the Buyer; (e) demolition of the Property improvements, including all above grade structures and associated asbestos and lead paint abatement; and (f) satisfactory implementation of the RAP, as amended by the Addendum, by the Buyer, including cleanup and confirmation sampling. By contract, CPI is obligated to move out of the Property no later than 30 months from the date of the Board's approval of the RAP (August 31, 2004). Purchase of the Property is anticipated to be completed at the time CPI has moved out and obtained regulatory closure.
4. The Released Parties are not responsible parties or affiliated with a responsible party for the known contamination or pollution, and will not be prior to November 1, 2006, an owner of the Property. The sole interest of Buyer in the Property is to purchase and redevelop the Property.

Buyer is arranging for the redevelopment of the Property to a productive use that will benefit the public and the community. Estimated benefits to the community include infilling, the use of existing infrastructure, providing jobs for about 1450 persons, with a payroll of about \$90,000,000 annually and the addition of needed hospital beds and medical care for the people of the Bay Area.
5. By entering into this Agreement, Buyer certifies that to the best of its knowledge and belief, it has fully and accurately disclosed to the Regional Board any and all information known to its officers, directors, employees, contractors and agents about pollution and/or contamination of the Property.
6. The Property is not the subject of active enforcement actions or agreement(s) with another agency to address the residual pollution at the site.
7. Buyer will pay for all reasonable costs associated with the Regional Board's development and oversight of this Mutual Release pursuant to the California Water Code.

8. This Mutual Release is consistent with the goals and purposes of state and federal law, including the Porter-Cologne Act and the federal Clean Water Act.
9. In order to ensure that no activities at the Property, with the exercise of due care, will aggravate, contribute to or create a condition of pollution or nuisance as a result of the Known Conditions, this Mutual Release will not require the application of engineering and institutional controls if the objectives of the RAP, as amended by the Addendum, are met.

#### **IV. Agreement**

1. In accordance with the Resolution, the Regional Board expressly finds that the Released Parties shall not be liable or otherwise responsible for such Known Conditions and hereby covenants and agrees not to initiate, bring, or support any claim, order, demand, enforcement action or other civil or administrative proceeding against the Released Parties or their respective successors and assigns upon satisfaction of the conditions set forth in the next sentence with respect to such Known Conditions under any local, state or federal statute, common law, or equitable doctrine, including but not limited to, in their entirety, the United States Code, the various California Codes, or other applicable laws, regulations, ordinances, or civil, judicial or administrative authorities, having application to the handling, release, presence, migration to, through or from, cleanup, containment or maintenance of the Known Conditions at, on, under or originating from the Property, or any portion thereof. This Mutual Release shall inure to the benefit of, and pass with each and every portion of the Property and shall benefit any respective successors and assignees of the Released Parties, provided such successors and assignees did not cause or contribute to the Known Conditions and provided further each such party that is not a signatory to this Mutual Release executes a written instrument in the form of Exhibit C hereof.
2. To the extent the Released Parties are entitled to protection from contribution actions or claims as provided by CERCLA Section 113(f)(2), 42 U.S.C. Section 9613(f)(2), for matters addressed in the Resolution, the Mutual Release and Covenant Not to Sue and the RAP, the parties agree that the Released Parties are entitled to invoke such protection.
3. This Release shall remain effective notwithstanding the revocation or modification of Board Resolution No. R2-2004-0087, and shall be without prejudice to the ability of the Regional Board to take action against any party other than the Released Parties, relating to the investigation, cleanup, or cost of investigation or cleanup of the Known Conditions. Except as provided in Paragraph 6, nothing contained in this Mutual Release is intended to waive, limit, preclude, diminish or hinder any right of the Released Parties now or in the future available in law, equity, or by agreement.
4. Notwithstanding any other provisions of this Mutual Release, the Regional Board reserves the right to assert any claims, enforcement actions or other civil or administrative proceeding against the respective Released Parties arising after the Effective Date which are based on the failure of the respective Released Parties, to the extent they have control over the Property, to (i) exercise due care at the Property with respect to the Known Conditions, (ii) comply with the above-described findings, (iii) satisfactorily implement and comply with the RAP, as amended by the Addendum, and (iv) cooperate in providing reasonable access to the Property as required by the

Regional Board. If the Regional Board determines that a Released Party has failed to materially comply with any of these four enumerated requirements, after notice and reasonable opportunity for cure, and the Regional Board elects to proceed against that Released Party, then this Mutual Release shall be suspended as to that Released Party, and the Regional Board and the Released Party shall then have any rights or defenses they would have had as if this Mutual Release and Covenant Not to Sue had not existed. If, following such proceeding, the Regional Board determines such action to be warranted, it may declare this Mutual Release to be null and void, with respect to that specific Released Party.

5. The reservation by the Regional Board set forth in Paragraph 4 shall be separately and distinctly applied with respect to each of the Released Parties, the intent being that failure by a particular Released Party to comply with any applicable requirement shall not render the Regional Board's covenant inapplicable to any other Released Party. Nothing contained in this Mutual Release shall be deemed a waiver of, or a release by, any Released Party of any defense available to such Released Party in response to any claim, order, demand, enforcement action or other civil or administrative proceeding by the Regional Board in contravention of this Mutual Release.
6. In partial consideration therefore, the Released Parties, on behalf of themselves and their respective successors in interest, hereby release and covenant not to sue the Regional Board, its authorized officers, employees or representatives, with respect to any and all liability or claims associated with or arising out of the Known Conditions.
7. The Mutual Release shall not prohibit the Regional Board from asserting any claim, enforcement action, or other civil or administrative proceeding related to any condition of pollution at, under, or originating from the Property that are not Known Conditions.
8. Each Released Party not defined above as a Released Party shall, as a precondition to receiving the benefits conferred by this Mutual Release, execute a written instrument in the form attached hereto and incorporated by reference as Exhibit C. Execution and mailing of Exhibit C to the Regional Board by or on behalf of any corporation, partnership, or other entity, shall be sufficient to confer the benefits of the Mutual Release upon all affiliates, parent or subsidiary corporations, and the respective directors, officers, employees, partners, members, agents, successors, and assigns of each such entity.
9. The Released Parties further agree to exercise due care at the Property with respect to the Known Conditions, and to comply with the above described RAP, as amended by the Addendum, to comply with all applicable local, state, and federal laws and regulations regarding the Property, and to cooperate in providing the Board, its agents, or Responsible Parties, reasonable access to the Property for any necessary monitoring purposes and any necessary operation, maintenance, and repair of wells and remediation facilities.
10. This Mutual Release shall be in full force and effect from the Effective Date. The Effective Date shall be the date upon which Buyer or its successor or assign takes title to the Property, whichever is later. Buyer shall have ninety (90) days from the date upon which it takes title to record the Mutual Release and Exhibits A, B, and C against the Property, provided that such period shall be extended by the period of time required by the Executive Officer to fully execute the Mutual Release. A copy of the recorded Mutual Release and Exhibits A, B, and C shall be provided to the Regional Board within twenty (20) days of the recording. The Regional Board shall provided acknowledgement of receipt of the recording as required by this paragraph. Notwithstanding anything to the contrary in the foregoing, if Buyer or its successor(s) fails to record the Mutual

San Francisco Bay Regional Water Quality Control Board  
Attachment to Resolution No. R2-2004-0087

Release and Exhibits A, B, and C within the time frame set forth above, and Regional Board or Executive Officer in its discretion does not extend the time, this Mutual Release shall automatically terminate.

11. This Mutual Release may be executed in one or more counterparts, each such counterpart being deemed an original but all counterparts constituting a single instrument.
12. Each of the undersigned parties hereby certifies, and warrants that he or she is authorized to bind his or her agency or entity to the continuing obligations described herein.

**CALIFORNIA REGIONAL WATER QUALITY BOARD  
SAN FRANCISCO BAY REGION**

By: \_\_\_\_\_  
Bruce H. Wolfe, Executive Officer

Date: \_\_\_\_\_

**301 INDUSTRIAL LLC**  
a California Limited Liability Company

By: \_\_\_\_\_  
A Member

Date: \_\_\_\_\_

San Francisco Bay Regional Water Quality Control Board  
Attachment to Resolution No. R2-2004-0087

STATE OF California       )  
                                      ) S.S.  
COUNTY OF Alameda       )

On \_\_\_\_\_, before me, \_\_\_\_\_, a notary public in and for  
such County and State, personally appeared \_\_\_\_\_ and  
\_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory  
evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and  
acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and  
that by his/her/their signature(s) on the instrument, the person(s) or entity upon behalf of which the  
person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

STATE OF \_\_\_\_\_ )  
                                      ) S.S.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, a notary public in and for  
such County and State, personally appeared \_\_\_\_\_ and  
\_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory  
evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and  
acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and  
that by his/her/their signature(s) on the instrument, the person(s) or entity upon behalf of which the  
person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

**APPENDIX I A**

**LEGAL DESCRIPTION**

Real property in the City of San Carlos, County of San Mateo, State of California,  
described as follows:

All of Parcel 1 as shown on the Parcel Map recorded in Volume 20 of Parcel Maps at  
page 23 in the Records of said County, described in metes as follows:

Beginning at Northerly corner of said Parcel; thence through the following numbered  
courses:

- 1) South 37° 56' 04" East 739.82 feet to a curve to the right with a radius of 447.00 feet
- 2) along said curve through a central angle of 33° 54' 48" an arc distance of 264.58 feet
- 3) South 04° 01' 16" East 182.93 feet to a curve to the left with a radius of 553.00 feet
- 4) along said curve through a central angle of 02° 38' 43" an arc distance of 25.53 feet
- 5) South 46° 51' 36" West 476.39 feet
- 6) North 42° 08' 24" West 1153.65 feet
- 7) North 47° 51' 36" East 752.91 feet to the point of beginning.

APN: 046-051-020 and 046-051-070



# California Regional Water Quality Control Board

## San Francisco Bay Region



**Terry Tamminen**  
Secretary for  
Environmental  
Protection

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**Arnold Schwarzenegger**  
Governor

Date: August 31, 2004  
File No. 41S0002 (SIM)

Mr. Alan Leavitt, P.E.  
Principal  
Northgate Environmental Management, Inc.  
3629 Grand Avenue  
Oakland, CA 94610

**Subject: Approval of Remedial Action Plan (RAP) dated June 16, 2004  
(with Addendum dated August 25, 2004)  
Communications and Power Industries property at 301 Industrial Way, San Carlos,  
as requested by 301 Industrial LLC**

Dear Mr. Leavitt:

We have reviewed and hereby approve the Remedial Action Plan and Addendum (RAP) for the above site that will allow for unrestricted use of the property. The approved RAP will be used to facilitate the development of the property. You have informed us that 301 Industrial LLC proposes to purchase the CPI site, develop it utilizing the RAP for probable sale to a private hospital and medical facility, and also utilize a Prospective Purchaser Agreement currently scheduled for adoption at the Board's October 20<sup>th</sup> meeting.

Previous contamination removal and closures and No Further Action Letters were sufficient for the existing industrial/commercial use. Redevelopment of the property to a hospital requires additional selected site cleanup so that the site meets unrestricted residential levels. The RAP will use the Regional Board's Residential ESLs as the Remedial Action Plan's cleanup goals to allow for unrestricted use. We concur in the concept as described in the RAP. Robust confirmation sampling and analysis will demonstrate satisfaction of the goals. You have also notified us that implementation of this RAP probably won't commence for up to 3 years and also won't be completed until 14 months later due to clearance of the site by CPI, building demolition, and the time necessary to complete removals and/or remediation. Should this time schedule change, please keep us informed in a timely manner.

Please contact Steve Morse (tel: 510-622-2393 or e-mail: [sim@rb2.swrcb.ca.gov](mailto:sim@rb2.swrcb.ca.gov)) if you have any questions.

Sincerely,

/s/ Stephen I. Morse  
for Bruce H. Wolfe  
Executive Officer

cc: see interested persons list

*Preserving, enhancing, and restoring the San Francisco Bay Area's waters for over 50 years*

Recycled Paper



## **Interested Parties List for 301 Industrial Road Remedial Action Plan**

### **RWQCB staff:**

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Nancy Katyl

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Barbara Cook, P.E., Chief  
Northern California – Coastal Cleanup  
Operations Branch  
Department of Toxic Substances Control  
700 Heinz, Suite 200  
Berkeley, California 94710

**Remedial Action Plan**

**301 Industrial Way  
San Carlos, California**

June 16, 2004

*Prepared For:*

301 Industrial LLC  
3629 Grand Avenue  
Oakland, California 94610

*Prepared By:*

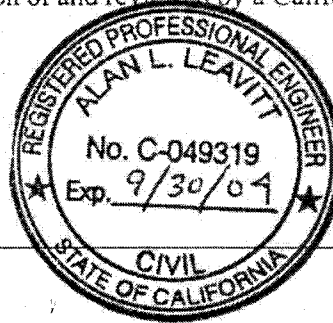
Northgate Environmental Management, Inc.  
3629 Grand Avenue  
Oakland, California 94610

## CERTIFICATION

All engineering information, conclusions, and recommendations in this Remedial Action Plan have been prepared under the supervision of and reviewed by a California Registered Professional Engineer.



Alan Leavitt  
Certified Engineer (C-049319)



Date 6/16/2004

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## 1.0 INTRODUCTION

Northgate Environmental Management, Inc. (Northgate) has prepared this remedial action plan (RAP) on behalf of 301 Industrial LLC (301) for the Communications and Power Industries (CPI) property located at 301 Industrial Way, in San Carlos, California (the "Site"; see Figure 1). CPI currently owns the Site, and operates a manufacturing facility at this location for the production of electrical components. Prior to CPI's ownership of the Site, Varian Associates, Inc. (Varian) also used the Site to manufacture electrical equipment.

Chemicals are known to be present in soil and groundwater at the Site, but at concentrations below the current approved cleanup goals for industrial use of the property. 301 proposes to acquire the Site for the construction and operation of a hospital and medical facility. Additional cleanup activities would be performed before this change in land use. The objective of this RAP is to describe the proposed remediation plan to be implemented prior to redevelopment of the Site for Unrestricted Uses. "Unrestricted Uses" refers to residential housing, child facilities (e.g., daycare, K-12 schools, preschools, playgrounds), elderly facilities (e.g., nursing homes, hospices, convalescent homes, senior centers, assisted living facilities), places of worship, hotels/motels, hospitals, skilled nursing and medical facilities, and similar sensitive receptors.

The California Regional Water Quality Control Board (RWQCB), California Department of Toxic Substances Control (DTSC), and San Mateo County Environmental Health Division (County) have previously overseen extensive environmental investigation, remediation, and facility closure activities at the Site. Northgate anticipates that the RWQCB will serve as lead agency to oversee implementation of this RAP, with review and concurrence by DTSC and the County.

## **2.0 SITE BACKGROUND**

### **2.1 Site Description**

The Site encompasses approximately 18.5 acres. The property is located between Highway 101 (to the east) and Industrial Way (to the west) as shown in Figure 1. Currently, the Site includes four main buildings (identified as Buildings 1, 2, 3, and 5), a wastewater treatment facility, hazardous waste storage area, other smaller structures, and parking lots (see Figure 2). The following description of CPI's facilities is based on information obtained from P&D Consultants (P&D) Phase I Site Assessment (2000). CPI will update the facility description when it performs a pre-closure facility audit to identify: (1) chemical, waste and equipment inventories; (2) the proposed disposition of those chemicals, waste, and equipment; (3) locations on the property where hazardous materials, substances, or wastes are known to have been stored, used, or generated at the facility by CPI, Varian, and others; and (4) a proposed sampling program.

Building 1 is or was used for manufacturing processes, including cutting and machining of metals, plating, degreasing, and winding of power tubes. Other portions of Building 1 include offices, laboratories, shipping and receiving area, clean rooms, and a cafeteria.

Building 2 contains or contained a machine shop, including cutting, machining, and degreasing of metals, parts department, and office space.

Building 3 is or was used for manufacturing operations similar to Building 1.

Building 4 was not constructed.

Building 5 is or was used for storage of supplies and maintenance equipment, and houses an electronic repair shop.

The Hazardous Materials Storage Area includes three sheds used to store chemicals, including products and wastes. These sheds include bermed and sloped floors that provide a secondary containment system for drummed materials stored within.

The industrial wastewater treatment facility is located northwest of Building 1. Historically, the system treated the following wastes containing dissolved metals: concentrated acids and cyanide solutions, as well as acid and cyanide solution rinse waters. The system is used to treat plating

process wastewater, including acid waste rinse water containing dissolved metals (e.g., primarily copper and nickel with trace concentrations of silver and gold) and cyanides. Treated wastewater is discharged to the municipal sewer system.

## **2.2 Site History**

The site was first developed in the mid-to-late 1950s as an industrial facility for the manufacturing of electronic components, including ceramic/metal power grid tubes and cavities. The 1961 Sanborn map identifies the site occupant as Eitel-McCullough Inc. (EIMAC), a company reportedly acquired by Varian in 1965. Varian continued to manufacture electronic components at the Site.

In 1980, Varian submitted a Part A application to DTSC for a permit to store hazardous wastes, including solvents, acids, bases, cyanides, and polychlorinated biphenyl (PCB) wastes, and to treat wastewater generated at the Site. The DTSC granted interim status to Varian for these units in 1981, and issued a hazardous waste facility permit to Varian in 1983. Varian continued to operate these facilities at the Site, pursuant to permits issued by the DTSC until 1995. At that time, Varian sold the EIMAC division to CPI, and transferred its hazardous waste facility permit to CPI. CPI closed the hazardous waste facility permit and operated its waste management units pursuant to permit-by-rule requirements. DTSC's letters approving CPI's previous closure activities and rescinding the RCRA permit are included as Appendix A to this RAP. CPI has continued to manufacture vacuum tubes and related electrical components at this location. CPI's activities include manufacturing and testing power tubes, research and design of power tube equipment, and shipping/receiving activities. The manufacturing processes include cutting and machining metal components, plating, degreasing, and testing the power tubes.

In addition to DTSC's requirements for management of hazardous wastes, CPI's manufacturing activities are subject to regulation by the County, RWQCB, Bay Area Air Quality Management District (BAAQMD), and South Bayside System Authority (local sanitation district).

## **2.3 Site Geology and Hydrogeology**

The Site is generally flat, with an elevation of approximately 5 feet above mean sea level. The ground surface slopes slightly towards the east. Based on Northgate's review of boring logs from the Site, the upper 5 to 6 feet of soil consist primarily of fill material, comprised of clayey sand to sandy clay with some gravel. This fill overlies the former marshland soils, commonly referred to as Younger Bay Mud.

The closest surface water body is Phelps Slough, located about 300 feet to the east of the Site. Phelps Slough drains to Steinberger Slough, which drains to San Francisco Bay. The depth to groundwater at the Site is typically about 6 to 10 feet below the ground surface (bgs). A shallow discontinuous water-bearing zone exists beneath the Site in the fill above the Bay Muds. Water gradients are relatively low with variable flow directions across the Site.

### 3.0 SUMMARY OF PREVIOUS INVESTIGATIONS

Northgate has assessed soil and groundwater contamination at the Site based on a review of previous environmental investigations, site assessments, closure reports, and recent soil and groundwater sampling programs for the Site. These activities and findings are summarized below.

From 1984 to the present, numerous environmental investigations have been performed to assess soil and groundwater quality at the known chemical handling areas of the Site. A partial list of these reports is included in Appendix B. Between 1984 and 1994, environmental investigations and monitoring activities were performed by Metcalf & Eddy, Kennedy/Jenks, Law Associates, Canonie Environmental, and Woodward-Clyde Consultants (see Appendix B).

In 1994, the DTSC completed a RCRA Facility Assessment (RFA) for the Site. The RFA identified 24 Solid Waste Management Units (SWMUs) and 18 Areas of Concern (AOC) at the Site. Varian subsequently completed extensive soil and groundwater investigations at the Site in response to the RFA. These activities were completed between 1994 and 1997, as described in the following documents:

- *RCRA Facility Assessment for Varian Power Grid Tube Products* (California Environmental Protection Agency, Department of Toxic Substances Control--Region 2, 1994)
- *Phase I Environmental Site Assessment of Varian Power Grid Tube Products DRAFT FINAL* (Montgomery Watson, 1995a)
- *RCRA Facility Investigation Final Report and Summary Report Varian Power Grid Tube Products* (Montgomery Watson, 1995b)
- *Final Report of Results Additional Field Investigation Former Varian Power Grid Tube Products* (Montgomery Watson, 1996a)
- *Human Health Risk Assessment Former Bldg 2 Drum Storage Area* (Montgomery Watson, 1996b)

Following completion of the RFA work, CPI closed its hazardous waste facility permit, as described in a report entitled *Closure Report of Hazardous Waste Storage Area* (Aqua Science Engineers, 1997).

These investigations indicated that contamination was localized in soil and shallow groundwater, with limited potential for migration beyond the apparent source areas. Varian obtained regulatory approvals to close all AOCs and the inactive SWMUs without further action, providing that the site continued to be used for industrial purposes. No further action was required for active SWMUs, which were to be addressed during facility closure (including SWMU 20, the sludge bin area, hazardous waste storage sheds, and wastewater treatment area). A detailed summary of the history of the SWMUs and AOCs, along with their current regulatory status, is provided in Table 1. As noted in this table, eight areas of the site have been remediated under the oversight of the RWQCB, DTSC, and the County.

## **4.0 REMEDIATION ZONES**

### **4.1 Criteria for Remediation**

#### ***4.1.1 Tier 2 Risk Assessment***

The proposed remedial goals for the Site are based on the Tier 2 Environmental Screening Levels (ESLs) established by the RWQCB (RWQCB, 2003a and b). The ESLs have been selected as these values would be health-protective for Unrestricted Uses, as previously defined. According to the RWQCB, the presence of a chemical in soil, soil gas, or groundwater at concentrations below the corresponding ESL can be assumed to not pose a significant, long-term threat to human health and the environment. A post-remediation risk assessment will be conducted following the remediation of soils and groundwater at the Site to assess potential health risks, if any, related to residual concentrations of chemicals detected at the Site.

In order to select the appropriate ESLs, the following steps have been completed:

- Identify the chemicals of potential concern and types of impacted media
- Determine the site-specific use of the land and the potential exposure pathways

The chemicals of potential concern identified at the Site include chlorinated hydrocarbons, petroleum hydrocarbons, and metals. These chemicals have been identified in soil and groundwater. Additionally, chlorinated hydrocarbons and petroleum hydrocarbons have been detected in soil gas at the Site.

Cleanup goals will be based on achieving the Unrestricted Uses standard. Based on planned response actions, it is anticipated that institutional controls (including deed restrictions) and/or engineering controls will not be necessary. Potential future exposure pathways may include inhalation via indoor air by occupants and direct exposure to soil by construction workers. No other potential exposure pathways have been identified for human or ecological receptors. No beneficial uses have been identified for groundwater as the total dissolved solids in groundwater is greater than 3,000 micrograms per liter (mg/l) and the shallow water-bearing unit (i.e., primarily young Bay Mud) is not sufficiently permeable to yield usable quantities of groundwater. No ecological receptors are present at the site, or in the vicinity of the site. Therefore, ESLs were considered only for direct exposure, inhalation via indoor air, and general resource degradation (ceiling values or leaching to groundwater).

#### **4.1.2 Proposed Remedial Goals**

The proposed remedial goals were selected to achieve Unrestricted Uses by using the most conservative ESL for each chemical of potential concern in each impacted media. Table 2 summarizes the ESLs and proposed remedial goals for volatile organic compounds (VOCs), metals, and other chemicals in soil. In the case of certain metals (arsenic, cadmium, chromium, and thallium), the proposed remedial goals are based on the estimated background concentrations for the Site vicinity. Table 3 summarizes the ESLs and proposed remedial goals for VOCs, metals, and other chemicals in groundwater. Table 4 summarizes the proposed remedial goals for VOCs in soil gas.

#### **4.2 Known Areas of Concern**

The proposed remedial goals were compared to the reported concentrations of chemicals detected in soil, soil gas, and groundwater from previous investigations, identifying areas of the Site requiring remediation, and defining the approximate extent of affected media. Although potential exposure point concentrations could be estimated using 95% upper confidence limits or other statistics, the proposed remediation areas have been defined by comparing the concentrations at individual sample locations to the proposed remedial goals. The actual excavation areas and depths will be determined based on additional field observations and laboratory analyses of samples collected during RAP implementation.

Northgate has identified eight areas of the Site where remediation is proposed, as shown on Figure 3. These areas are summarized below and described in detail in Table 5.

##### **4.2.1 Former Ceramics Plating Shop/Sump Area**

This portion of the Site was located in Building 1. The impacted area includes AOC 16, which represents the former ceramics plating shop, and SWMU 15, which refers to the former plating waste sump (see Figure 4). As summarized in Table 1, these areas were conditionally closed based on industrial cleanup goals, with no further action pending future changes in land use. Elevated levels of nickel are present in soil and groundwater in the vicinity of the former ceramics plating shop and sump.

#### **4.2.2 Former Chemical Kitchen Area**

This portion of the Site is located in Building 1. The impacted area includes AOC 14, which represents the former chemical kitchen (see Figure 5). As summarized in Table 1, this area was conditionally closed based on industrial cleanup goals, with no further action pending future changes in land use. Elevated levels of VOCs including TCE, PCE, vinyl chloride, cis-1,2-DCE, and 1,1-DCA are present in soil and groundwater in the vicinity of the former chemical kitchen.

#### **4.2.3 SWMU 11 Area**

This area is associated with a former 750-gallon concrete sump in Building 1 (see Figure 6). This sump was used to contain plating water. SWMU 11 was identified in the RFA and subsequently closed based on industrial cleanup goals, with no further action, pending future changes in land use. Metals and cyanide were detected in soil in this area. More recent sampling for VOCs indicated the presence of TCE in soil and groundwater, and vinyl chloride in shallow groundwater in the vicinity of this former SWMU.

#### **4.2.4 Former TCA Tank and Drum Storage Area**

This area is located along the east sidewall of Building 2. The impacted area includes AOC 11, which represents the 1,1,1-TCA storage tanks, and SWMU 15, which refers to the former drum storage area (see Figure 7). As summarized in Table 1, these areas were subject to previous remediation and conditionally closed based on industrial cleanup goals, with no further action pending future changes in land use. Elevated levels of VOCs, including TCE, PCE, vinyl chloride, 1,1-DCE, and 1,1-DCA are present in soil and groundwater in the vicinity of the 1,1,1-TCA storage tanks and former drum storage area.

#### **4.2.5 Former Gasoline UST Excavation Area**

This area is located outside the southwestern corner of Building 1. The impacted area includes AOC 1, which represents a former underground storage tank (UST) that was used to store gasoline (see Figure 8). Leakage from the UST was detected and remediated in the mid-1980s, as discussed in the DTSC's RFA (DTSC, 1994). As summarized in Table 1, this area was closed and the UST was removed. Elevated levels of VOCs, including benzene, toluene, ethylbenzene, and xylenes, and total petroleum hydrocarbons as gasoline (TPH-gasoline) are present in soil and groundwater in the vicinity of the former UST.

#### ***4.2.6 Transformer Area***

This area is located on the northwest side of Building 3, in the vicinity of transformers and associated oil tanks and piping (see Figure 9). This area was never identified as an AOC or SWMU in the RFA. However, PCBs and TPH have been detected in shallow soil in a localized portion of this area.

#### ***4.2.7 Hazardous Waste Storage Area***

This area consists of three storage sheds located north of Building 5 (see Figure 10). This portion of the Site was formerly permitted as a hazardous waste storage area. Although this facility was closed, it continues to be used for storing hazardous materials and wastes. VOCs, including TCE and PCE, have been detected in soil in and around storage sheds B and C.

#### ***4.2.8 Former Evaporation Ponds Area***

This portion of the Site is located west of Building 2, and was temporarily used for an industrial wastewater treatment facility, including three sludge evaporation ponds (see Figure 11). Sludge generated by the wastewater treatment facility was temporarily stored in these evaporation ponds. As summarized in Table 1, this area (referred to as SWMU 4), was remediated and closed. Elevated levels of chromium remain in soil at this portion of the Site.

## **5.0 PROPOSED REMEDIAL APPROACH**

### **5.1 Description**

Remedial activities will be performed after CPI closes its hazardous material facilities, and the existing buildings and other Site improvements have been demolished and removed from the Site. Varian owns the existing monitoring wells at the Site, and will properly abandon its wells in accordance with state and local requirements, prior to 301 gaining title to or remediating the Site.

The proposed remedy includes three primary components, as follows:

- Excavation, treatment, or disposal of contaminated soil
- Dewatering/treatment of contaminated groundwater, as necessary
- In situ treatment of residual organic compounds, if necessary

These remedial components are proven technologies that can be readily implemented at the Site as summarized below. Table 5 describes where these technologies are proposed for specific remediation zones at the Site.

#### ***5.1.1 Excavation, Treatment, and Disposal of Contaminated Soil***

Soil containing chemicals of concern above the remedial goals (or above background concentrations, in the case of metals) will be excavated. This remedial component will apply to both unsaturated- and saturated-zone soils. On average, the unsaturated-zone soils consist of fill that extend to 6 feet bgs; the saturated-zone soil generally consists of Bay Mud. Depending on the extent of contamination, excavations are planned to range from approximately 4 to 12 feet bgs. It is anticipated that excavation areas will be sloped approximately 2 to 1 (horizontal to vertical) to maintain stable slopes. The actual excavation areas and depths will be determined based on field observations (e.g., evidence of discolored or stained soil, PID measurements of soil samples, etc.) and laboratory analyses of soil samples from the sidewalls and bottom of excavation pits and groundwater re-entering excavation pits (as outlined in Table 6) for metals and VOCS. Laboratory analyses of soil samples from the sidewalls and bottom of excavation pits and groundwater re-entering excavation pits for metals and VOCs and post-excavation soil gas sampling (see Table 6) for VOCs will be used to confirm that the contaminated soil has been appropriately cleaned up. Excavated soil will be segregated and stockpiled for chemical analyses.

Soil containing chemicals at concentrations above the remedial goals will be disposed at an appropriate permitted off-site facility. Alternatively, soil may be treated onsite by aeration or biodegradation, in accordance with BAAQMD regulations. Each excavation pit will be sampled prior to backfilling to confirm that soil cleanup criteria have been achieved. Additional soil may be excavated, or other remedial measures will be performed if necessary, to achieve remedial goals as discussed below. Excavated soil that does not contain chemical concentrations above the remedial goals (e.g., overburden soils and cut slopes) will be reused to backfill excavation areas.

#### ***5.1.2 Dewatering of Excavation Areas and Treatment of Contaminated Groundwater***

Remediation areas that extend into the saturated zone may be kept open for a period of several days to several weeks, to provide the opportunity for groundwater to seep into the excavations. The purpose of this step is to remove additional chemicals of concern that are potentially present in the discontinuous water-bearing zones adjacent to the excavation boundaries. Following the completion of excavation, water entering the excavations will be tested (as outlined in Table 6) for those chemicals exceeding remedial goals for the excavated soil and reviewed to determine if additional excavation is required. Water that is pumped out of the excavations will be treated, as necessary, prior to onsite discharge (i.e., to sanitary sewer or storm drain via discharge permits) or hauled to an approved offsite facility for treatment or disposal.

#### ***5.1.3 In Situ Treatment of Residual VOCs***

In the event that remedial goals cannot be entirely achieved through the excavation and dewatering activities described above, remaining chemicals that are biodegradable may be treated in situ with enhanced bioremediation technologies. Hydrogen donors (e.g., lactate, cheese whey, or other readily degradable carbon sources) may be added to the saturated zone to stimulate the naturally-occurring soil microorganisms to break down chlorinated hydrocarbons to non-toxic substances. Oxidants could also be added to stimulate the rapid degradation of petroleum hydrocarbons. While the above technologies are well-established, a treatability study may be conducted to select the most effective chemicals for enhanced bioremediation of residual chemicals of concern.

As previously noted, most of the shallow saturated zone soil is composed of low permeable Bay Mud. If in situ treatment is selected as a remedial component for selected areas, an engineered permeable layer may be constructed in the excavation, prior to backfilling, to facilitate delivery of hydrogen donors and/or oxidants to the affected zones. The engineered permeable layer (e.g., Class II permeable fill) would be placed along the sides of the excavation pit and a horizontal layer placed at the Bay Mud/native fill interface (see Figure 12). The remaining excavation areas

will be backfilled with clean Bay Mud or other clean backfill. The engineered permeable layer will allow for subsequent additions of hydrogen donor and/or oxidants, if necessary to enhance the degradation of chemicals of concern in the saturated zone.

If an in situ technology is used to treat saturated zone soil or groundwater, then the confirmation sampling plan in Table 6 will be modified to include soil gas and groundwater monitoring. Such monitoring will be conducted following backfilling and will include sampling both from within the engineered permeable layer and laterally on all sides at an appropriate distance from the edge of the engineered permeable layer. All sampling and analytical methods used will have sufficient sensitivity to confirm whether or not remedial goals have been achieved.

## **5.2 Schedule**

CPI will be re-locating its operation from the Site over the next 24 months, including the closure and decommissioning of its facilities. Following RWQCB approval of this RAP and the acquisition of local permits, Varian will abandon its existing monitoring wells at the Site. Remedial activities are expected to be completed within 12 to 18 months following demolition and removal of Site structures. Remedial activities may be phased in conjunction with CPI's closure and demolition schedule. After source areas are excavated and dewatered, residual chemicals may be treated in situ, if necessary, to achieve the remedial goals. 301 will provide a more detailed schedule to the RWQCB prior to commencement of remediation, and will update the RWQCB periodically on progress implementing the RAP.

## 6.0 REFERENCES

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- P & D Consultants. 2000. *Expanded Phase I Environmental Site Assessment*. October.

**Table 1**  
**Summary of AOCs and SWMUs**

Area of Concern	History	Current Regulatory Status
SWMU 1: Former Drum Storage Area	<ul style="list-style-type: none"> <li>Installed in 1960s</li> <li>Asphalt area with sandbag berms; sloped to the north</li> <li>Located in an open area in the northeast corner of the facility</li> <li>Potassium cyanide, silver cyanide, alcohols, acetone, PCE, TCE, acidic solutions w/metals, PCBs, waste oils, asbestos, nitrocellulose; majority of wastes in 55 gallon drums</li> <li>Reported releases of waste xylene, waste acetone, and waste etching solution</li> <li>Closed by the DTSC in 1985</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 2: Solvent Pit	<ul style="list-style-type: none"> <li>Installed in early 1960s</li> <li>10-inch augered, gravel-filled hole; unlined</li> <li>Located south of the former wastewater treatment system</li> <li>Reported releases of 500 to 600 gallons of waste acetone containing barium carbonate and a methanol-rhodamine dye</li> <li>Abandoned shortly after installation due to poor percolation rates</li> <li>Contaminated soil was excavated and disposed off-site by Varian</li> <li>Closed by the DTSC in 1985</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 3: Acid Pits	<ul style="list-style-type: none"> <li>Installed in 1962</li> <li>(2) 6-foot diameter pits</li> <li>Located at the southeast corner of the hazardous waste storage sheds</li> <li>Reported releases of 500 gallons of acid waste metal plating solutions containing principally copper and nickel</li> <li>Failed to percolate</li> <li>Closed in 1963 and backfilled</li> <li>Paved and hazardous waste storage shed built over location</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 4: Former Wastewater Treatment Area	<ul style="list-style-type: none"> <li>Installed in 1970s</li> <li>System consisted of a neutralization tank, (2) settling pools, (2) concentrated acid storage tanks, and a 30% sodium hydroxide tank for neutralizing and removing metals from wastewater</li> <li>From 1976 to 1982, sludge generated by the wastewater treatment facility was stored in (3) evaporation ponds; ponds were replaced in 1982 by a sludge thickening tanks and filter press</li> <li>Located east of the existing wastewater treatment facility</li> <li>Numerous releases reported</li> <li>Contaminated soil in the evaporation pond area was excavated and disposed off-site by Varian in 1985</li> <li>Evaporation pond area closed in 1985</li> <li>System closed by the DTSC; date unknown</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> <li><b>Additional remediation necessary to meet cleanup goals for unrestricted land use</b></li> </ul>
SWMU 5: Waste Methanol Tank	<ul style="list-style-type: none"> <li>see AOC 3</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 6: Chrome System	<ul style="list-style-type: none"> <li>Installed in 1985</li> <li>System consisted of an acid/chromate holding tank, a chrome reduction tank, and a sodium metabisulfite tank</li> <li>Located in the existing wastewater treatment facility in the area currently occupied by the deionization system</li> <li>Closed by the DTSC in 1991</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>

**Table 1**  
**Summary of AOCs and SWMUs**

Area of Concern	History	Current Regulatory Status
SWMU 7: 60-Gallon Concrete Waste Sump w/PVC Lining for Process Wastewater	<ul style="list-style-type: none"> <li>Installed in 1976</li> <li>Concrete vault with PVC liner north of Building 1 between Building 1 and 2</li> <li>Collected, treated, and transferred cyanide wastewaters (including copper and silver cyanides); sodium hypochlorite used to treat cyanides prior to pumping to the former wastewater treatment system</li> <li>Closed in 1985 following the construction of the existing wastewater treatment system</li> <li>Additional investigation recommended by DTSC per 1994 RFA</li> <li>RCRA Facility Investigation conducted in 1995</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (Response to RFI 1995)</li> </ul>
SWMU 8: 800-Gallon Concrete Waste Sump for Acid Wastewater	<ul style="list-style-type: none"> <li>Installed in 1979</li> <li>Concrete vault with rubber/epoxy liner in Building 1</li> <li>Collected and transferred acidic wastewater containing metals (including hydrochloric, nitric, and sulfuric acids containing copper, nickel, iron, cobalt, tungsten, molybdenum, and aluminum</li> <li>Closed in 1986 by the SMCDHS</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 9: 30-Gallon Concrete Waste Sump for Process Wastewater w/Acetone	<ul style="list-style-type: none"> <li>Installed around 1962</li> <li>Concrete vault with PP liner in the west end of Building 1</li> <li>Collected and transferred wastewater (including acetone and acidic solutions w/metals including copper, nickel, and chromium)</li> <li>Closed in 1986 by the SMCDHS</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 10: 90-Gallon Concrete Waste Sump for Acidic Wastewater w/ Metals	<ul style="list-style-type: none"> <li>Installed around 1964</li> <li>Concrete vault with PP liner in the northeast end of Building 1</li> <li>Collected and transferred wastewater (including hydrochloric, nitric, and sulfuric acid solutions containing primarily nickel)</li> <li>Closed in 1985 the SMCDHS</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 11: 750-Gallon Concrete Waste Sump for Acidic Wastewater w/ Metals	<ul style="list-style-type: none"> <li>Installed around 1960</li> <li>Concrete vault with PP liner in the center of Building 1</li> <li>Collected and transferred wastewater (including cyanide and acidic solutions w/metals including copper, nickel, silver, iron, and cobalt)</li> <li>Closed in 1976</li> <li>Additional investigation recommended by DTSC per 1994 RFA</li> <li>RCRA Facility Investigation conducted in 1995</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (Response to RFI 1995)</li> <li>Additional remediation necessary to meet cleanup goals for unrestricted land use</li> </ul>
SWMU 12: 140-Gallon Concrete Waste Sump for Treated Process Wastewater	<ul style="list-style-type: none"> <li>Installed around 1960</li> <li>Concrete vault lined with tar adjacent to the outside north wall of Building 1</li> <li>Collected and transferred wastewater from a zirconium coating operation</li> <li>Closed in 1985</li> <li>Additional investigation recommended by DTSC per 1994 RFA</li> <li>RCRA Facility Investigation conducted in 1995</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (Response to RFI 1995)</li> </ul>
SWMU 13: 250-Gallon Dual Chamber Concrete Waste Sump for Dilute Acidic/Cyanide Wastewaters w/ Metals	<ul style="list-style-type: none"> <li>Installed in 1960s</li> <li>Concrete vault with PVC liner and transfer tanks adjacent to the outside north wall of Building 1</li> <li>Collects and transfers cyanide or acid wastes w/metals</li> <li>Numerous releases reported</li> <li>Replaced with existing sump system in the early 1980s</li> <li>Currently in use</li> <li>Additional investigation recommended by DTSC per 1994 RFA</li> <li>RCRA Facility Investigation conducted in 1995</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (Response to RFI 1995)</li> </ul>

**Table 1**  
**Summary of AOCs and SWMUs**

Area of Concern	History	Current Regulatory Status
SWMU 14: 800-Gallon Dual Chamber Concrete Waste Sump for Acidic/Cyanide Wastewaters w/Metals	<ul style="list-style-type: none"> <li>Installed in 1976</li> <li>Concrete vault with PVC liner and transfer tanks adjacent to the outside north wall of Building 1</li> <li>Collected and transferred acid and cyanide w/metals</li> <li>Numerous releases reported</li> <li>Additional investigation recommended by DTSC per 1994 RFA</li> <li>RCRA Facility Investigation conducted in 1995</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (Response to RFI 1995)</li> <li>Closure letter from SMCDDHS in 1995</li> </ul>
SWMU 15: Epoxy Coated Concrete Waste Sump w/PVC Liner for Acidic Wastewaters w/Metals	<ul style="list-style-type: none"> <li>Installed around 1965</li> <li>Concrete vault and transfer tank located adjacent to the Former Ceramics Plating Shop</li> <li>Collected and transferred acidic metal wastes including nickel, nickel alloys, copper, molybdenum, and chromium</li> <li>Additional investigation recommended by DTSC per 1994 RFA, conducted in 1995</li> </ul>	<ul style="list-style-type: none"> <li>Closure letter from SMCDDHS in 1995</li> </ul>
SWMU 16: Former Drum Storage Area	<ul style="list-style-type: none"> <li>see AOC 11</li> <li>Additional investigation recommended by DTSC per 1994 RFA</li> </ul>	<ul style="list-style-type: none"> <li>No further action until land use changes per RWQCB (Closure letter in 1997)</li> <li>Additional remediation necessary to meet cleanup goals for unrestricted land use</li> </ul>
SWMU 17: Former Scrap Metal & Oil Coolant Storage Area	<ul style="list-style-type: none"> <li>Installed around 1960</li> <li>Fenced area for storing drums located west of Building 2</li> <li>Metal turnings, scrap metal, waste coolants and oil</li> <li>Closed in 1982</li> <li>Varian excavated oily soil and disposed at a Class I landfill</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 18: Scrap Metal Bin Area	<ul style="list-style-type: none"> <li>Installed in 1960s</li> <li>Area south of SWMU 1</li> <li>Scrap metals (may have contained some oil)</li> <li>Closed in 1981</li> <li>Varian excavated all visibly contaminated soil and disposed at a Class I landfill</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 19: 1,000-Gallon Waste Concentrated Acid Storage Tank	<ul style="list-style-type: none"> <li>Installed in 1976</li> <li>PP tank located adjacent to SWMU 14</li> <li>Collected concentrated acidic metal wastes</li> <li>Numerous releases reported</li> <li>Remedial measures included flushing and collecting storm drain contents and excavation of contaminated soil</li> <li>Closed in 1985</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
SWMU 20: 300-Gallon Concrete Waste Sump for Process Wastewater w/Copper	<ul style="list-style-type: none"> <li>Installed in 1965</li> <li>Concrete vault</li> <li>Collects and transfers wastewater w/metals</li> <li>Currently in use</li> </ul>	<ul style="list-style-type: none"> <li>To be closed under the SMCDDHS when operation ceases (RFA 1994)</li> </ul>
SWMU 21: Sludge Bin Area	<ul style="list-style-type: none"> <li>Installed in 1982</li> <li>Contains dumpster to store sludge removed from the WWTP</li> <li>Sludge primarily contains copper, nickel, iron, and silver</li> <li>Currently in use</li> </ul>	<ul style="list-style-type: none"> <li>To be addressed during closure of the facility (RFA 1994)</li> </ul>

**Table 1**  
**Summary of AOCs and SWMUs**

Area of Concern	History	Current Regulatory Status
SWMU 22: Wastewater Transfer Sumps	<ul style="list-style-type: none"> <li>Installed in 1991</li> <li>Coated concrete vaults and tanks</li> <li>Collection tanks for concentrated cyanide, dilute cyanide, and acidic metal wastes</li> <li>Currently in use</li> </ul>	<ul style="list-style-type: none"> <li>No further action (RFA 1994)</li> </ul>
SWMU 23: Hazardous Waste Storage Sheds	<ul style="list-style-type: none"> <li>Installed in 1983</li> <li>Three sheds for chemical storage</li> <li>Acids, bases, solvents, cyanides, oils, and more</li> <li>Currently in use</li> </ul>	<ul style="list-style-type: none"> <li>To be addressed during closure of the facility (RFA 1994)</li> <li>Additional remediation necessary to meet cleanup goals for unrestricted land use</li> </ul>
SWMU 24: Wastewater Treatment Facility	<ul style="list-style-type: none"> <li>Installed in 1984</li> <li>System consists of (14) tanks and (1) filter press including cyanide destruction tanks, pH adjustment tanks, a clarifier tank, a sand filter tank, chemical storage tanks, waste storage tanks, a diversion tank, a thickener tank, and a filtrate collection tank</li> <li>Treats wastewaters such as concentrated and dilute acidic and caustic solutions that contain metals along with concentrated and dilute cyanide solutions w/metals</li> <li>Currently in use</li> </ul>	<ul style="list-style-type: none"> <li>To be addressed during closure of the facility (RFA 1994)</li> </ul>
AOC 1: 1,000-Gallon Gasoline Tank	<ul style="list-style-type: none"> <li>Installed in 1976</li> <li>UST located outside the southwestern corner of Building 1</li> <li>Potential gasoline leak identified in 1985</li> <li>Closed and removed in 1985 under the SMCDDHS</li> <li>Aeration performed to reduce gasoline levels</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> <li>Additional remediation necessary to meet cleanup goals for unrestricted land use</li> </ul>
AOC 2: 120-Gallon Gasoline Tank	<ul style="list-style-type: none"> <li>Installed in 1964</li> <li>UST located west of Building 1 near the western fence of the facility</li> <li>Closed and removed in 1986 under the SMCDDHS</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 3: 3,000-Gallon Methanol Tank	<ul style="list-style-type: none"> <li>Installed in 1958</li> <li>UST located adjacent to SWMU 5</li> <li>Methanol in groundwater discovered in 1983</li> <li>Completed remediation of soil and groundwater contaminated with methanol under the RWQCB</li> <li>Closed in place in 1987</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 4: Concentrated Hydrochloric Acid Tank	<ul style="list-style-type: none"> <li>Installed in early 1960s</li> <li>AST located adjacent to the western fence of the facility</li> <li>Bulk storage for concentrated hydrochloric acid</li> <li>Numerous releases reported</li> <li>Closed and removed in 1985</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 5: 1,1,1-TCA Storage Tank	<ul style="list-style-type: none"> <li>Installed around 1960</li> <li>AST located on the north wall of Building 1</li> <li>TCA after 1976; may have been used for TCE prior to 1976</li> <li>Closed and removed in 1992</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 6: 1,1,1-TCA Storage Tank	<ul style="list-style-type: none"> <li>Installed around 1976</li> <li>AST located adjacent to the outside south wall of Building 3</li> <li>TCA storage plumbed to a degreaser</li> <li>Removed in 1986</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>

**Table 1**  
**Summary of AOCs and SWMUs**

Area of Concern	History	Current Regulatory Status
AOC 7: Sodium Hydroxide Storage Tank	<ul style="list-style-type: none"> <li>Installed in early 1960s</li> <li>Supplied sodium hydroxide to fume scrubbers and deionization system; located on roof of Building 1</li> <li>(2) releases reported</li> <li>Removed in 1992</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 8: Sodium Hydroxide Storage Tank	<ul style="list-style-type: none"> <li>Installed in early 1960s</li> <li>Supplied sodium hydroxide to fume scrubbers and deionization system; located on roof of Building 2</li> <li>Removed in 1992</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 9: Nitric Acid Tank	<ul style="list-style-type: none"> <li>Installed around 1960</li> <li>Nitric acid plumbed to metal cleaning and plating operations; located on roof of building 1</li> <li>Closed and removed in 1985</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 10: 1,1,1-TCA Storage Tank	<ul style="list-style-type: none"> <li>Installed in 1991</li> <li>AST located next to SWMU 22 between Buildings 1 and 5</li> <li>TCA plumbed to degreasers</li> <li>(1) release and cleanup reported</li> <li>Currently in use</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 11: Two 1,1,1-TCA Storage Tanks	<ul style="list-style-type: none"> <li>Installed in 1960s</li> <li>ASTs located adjacent to the outside east wall of Building 2 near SWMU 16</li> <li>TCA plumbed to degreasers; TCA after 1976, may have been used for TCE prior to 1976</li> <li>Chlorinated solvents detected in soil following remediation of soil after a diesel spill in 1991</li> <li>Currently in use</li> <li>Additional investigation recommended by DTSC per 1994 RFA; conducted in 1995</li> </ul>	<ul style="list-style-type: none"> <li>No further action until land use changes per RWQCB (Closure letter in 1997)</li> <li><b>Additional remediation necessary to meet cleanup goals for unrestricted land use</b></li> </ul>
AOC 12: Acetone Storage Tank	<ul style="list-style-type: none"> <li>Installed in early 1960s</li> <li>AST located inside shed west of Building 5</li> <li>Removed in 1985</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 13: Anhydrous Ammonia Storage Tank	<ul style="list-style-type: none"> <li>Installed in early 1960s</li> <li>AST located at the southwestern portion of the facility just inside the fence</li> <li>Emptied and backfilled with nitrogen prior to 1984</li> <li>Removed in 1992</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 14: Former Chemical Kitchen	<ul style="list-style-type: none"> <li>Constructed around 1960</li> <li>Metal cleaning and plating operations located in the north end of Building 1</li> <li>Wastewater flowed to SWMU 13</li> <li>Additional investigation recommended by DTSC per 1994 RFA</li> </ul>	<ul style="list-style-type: none"> <li>No further action until land use changes per RWQCB (Closure letter in 1996)</li> <li><b>Additional remediation necessary to meet cleanup goals for unrestricted land use</b></li> </ul>
AOC 15: Former Gold Room	<ul style="list-style-type: none"> <li>Constructed around 1970</li> <li>Gold plating operation located in the north end of Building 1</li> <li>Wastewater flowed to SWMU 13</li> <li>Closed in 1992</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended by DTSC (RFA 1994)</li> </ul>

**Table 1**  
**Summary of AOCs and SWMUs**

Area of Concern	History	Current Regulatory Status
AOC 16: Former Ceramics Plate Shop	<ul style="list-style-type: none"> <li>• Constructed around 1960</li> <li>• Metal cleaning and plating operations in Building 1</li> <li>• Wastewater flowed to SWMU 15</li> <li>• Additional investigation recommended by DTSC per 1994 RFA</li> <li>• Additional Field Investigation conducted in 1996</li> </ul>	<ul style="list-style-type: none"> <li>• No further action until land use changes by SMCDDHS and RWQCB (Closure letter in 1996)</li> <li>• <b>Additional remediation necessary to meet cleanup goals for unrestricted land use</b></li> </ul>
AOC 17: Former Building 3 Plate Shop	<ul style="list-style-type: none"> <li>• Constructed around 1976</li> <li>• Metal cleaning and plating operations in Building 3</li> <li>• Wastewater flowed to SWMU 14</li> <li>• Closed in 1992</li> </ul>	<ul style="list-style-type: none"> <li>• No further action recommended by DTSC (RFA 1994)</li> </ul>
AOC 18: Sump in Basement of Building 3	<ul style="list-style-type: none"> <li>• Constructed in 1961</li> <li>• Located in basement of Building 3</li> <li>• Several releases reported including to storm drains</li> <li>• Currently in use</li> </ul>	<ul style="list-style-type: none"> <li>• No further action recommended by DTSC (RFA 1994)</li> </ul>

Table 2

## VOCs in Soil

## Metals in Soil

Ch. 2, sec. 1, of the Bill of Rights. Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition for a redress of grievances.

**Others in Soil**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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- \* proposed remedial goal is equivalent to Upper 95% Confidence Limit values for background soil concentrations, taken from Lawrence Berkeley National Laboratory Study, 1995

Table 3  
Proposed Remedial Goals for Groundwater

VOCs in Groundwater											
RWQCB ESLs <sup>1</sup>	Chemical of Potential Concern (ug/l)										
	TCE	PCE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Vinyl Chloride	1,1,1-TCA	1,1,2-TCA	1,1-DCE	trans-1,2-DCE
Tier 2 ESL, Residential Land Use, Indoor Air <sup>2</sup>	530	130	530	50000	14000	15000	4	13000	350	1000	6700
Tier 2 ESL, Residential Land Use, Ceiling Level <sup>3</sup>	5000	300	2000	400	300	5300	3400	5000	5000	15000	2600
Proposed Remedial Goal for VOCs in Groundwater	530	130	530	400	300	5300	4	5000	350	1000	2600

Metals in Groundwater											
RWQCB ESLs <sup>1</sup>	Chemical of Potential Concern (ug/l)										
	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum
Tier 2 ESL, Residential Land Use, Ceiling Level <sup>3</sup>	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Proposed Remedial Goal for Metals in Groundwater	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000

Others in Groundwater			
RWQCB ESLs <sup>1</sup>	Chemical of Potential Concern (ug/l)		
	Cyanide	TPH-G	TPH-MO
Tier 2 ESL, Residential Land Use, Ceiling Level <sup>3</sup>	1700	16	2500
Proposed Remedial Goal for Others in Groundwater	1700	16	2500

1. RWQCB ESLs taken from Screening from Environmental Concerns At Sites With Contaminated Soil and Groundwater, Volumes 1 and 2, Interim Final - July 2003 issued by the California Regional Water Quality Control Board - San Francisco Bay Region  
2. Table E-1a Groundwater Screening Levels For Evaluation Of Potential Indoor-Air Impacts, Residential Land Use, High Permeability Vadose Zone Soil Type  
3. Table I-2 Groundwater Ceiling Levels

**Table 4**  
**Proposed Remedial Goals for Soil Gas**

VOCs in Soil Gas															
RWQCB ESLs <sup>1</sup>	Chemical of Potential Concern (ug/m <sup>3</sup> )														
	TCE	PCE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Vinyl Chloride	1,1,1-TCA	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	trans-1,2-DCE	
Tier 2 ESL, Residential Land Use, Indoor Air <sup>2</sup>	1200	410	84	83000	2200	21000	31	46000	150	1500	42000	120	7300	15000	
Proposed Remedial Goal for VOCs in Soil Gas	1200	410	84	83000	2200	21000	31	46000	150	1500	42000	120	7300	15000	

<sup>1</sup> RWQCB ESLs taken from Screening from Environmental Concerns At Sites With Contaminated Soil and Groundwater, Volumes 1 and 2, Interim Final - July 2003 issued by the California Regional Water Quality Control Board - San Francisco Bay Region

<sup>2</sup> Table E-2 Shallow Soil Gas Soil Screening Levels For Evaluation Of Potential Indoor-Air Impacts, Residential Exposure

**Table 5**  
**Summary of Known Areas of Concern and Remedial Approach**

Name of Area	Chemicals of Potential Concern	Primary Risk Drivers	Proposed Mitigation Methods
Former Ceramic Plating Shop Area	<ul style="list-style-type: none"> <li>Nickel above proposed remedial goal in soil in numerous locations at least 4 to 6 ft bgs, very limited data below 6 ft bgs</li> <li>Nickel above proposed remedial goal in groundwater at CP-3 at least 6 ft bgs</li> <li>Elevated concentrations of nickel in groundwater at numerous locations at least 6 to 15 ft bgs</li> </ul>	<ul style="list-style-type: none"> <li>Direct Exposure (Soil)</li> <li>Ceiling Value (GW)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 84' (W) x 105' (L) x 12' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Excavation of soil in saturated zone containing soil or groundwater above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (RCRA), Class I (Cal Haz), or Class II landfill</li> <li>Groundwater extraction and ex-situ treatment of groundwater in open excavation pit</li> <li>Backfill</li> </ul>
Former Chemical Kitchen Area	<ul style="list-style-type: none"> <li>TCE above proposed remedial goal in soil at GP-11 at least 7.5 ft bgs</li> <li>Vinyl chloride above proposed remedial goal in soil at NGB-10 at least 3 ft bgs; numerous locations with detection limits above the proposed remedial goal</li> <li>TCE above proposed remedial goal in groundwater at GP-11 at least 6 to 15 ft bgs</li> <li>PCE above proposed remedial goal in groundwater at W-3 at least 6 to 15 ft bgs</li> <li>Vinyl chloride above proposed remedial goal in groundwater at W-2, W-3, and CK-4 at least 6 to 15 ft bgs; numerous locations with detection limits above the proposed remedial goal</li> <li>1,1-DCA above proposed remedial goal in groundwater at CK-3 at least 8 ft bgs</li> <li>TCE above proposed remedial goal in soil gas at SG-1, SG-2, and SG-3 at 2 ft bgs</li> <li>Cis-1,2-DCE above proposed remedial goal in soil gas at SG-3 at 2 ft bgs</li> </ul>	<ul style="list-style-type: none"> <li>Indoor Air (Soil and GW)</li> <li>Direct Exposure (Soil)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 163' (W) x 83' (L) x 12' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Excavation of soil in saturated zone containing soil or groundwater above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (Cal Haz) or Class II landfill</li> <li>Groundwater extraction and ex-situ treatment of groundwater in open excavation pit</li> <li>If necessary, open pit application of a hydrogen donor in a Class II permeable backfill along with subsequent post-backfill injections.</li> <li>Backfill</li> </ul>
SWMU 11 Area	<ul style="list-style-type: none"> <li>TCE above proposed remedial goal in soil at B-22 and B-25 at least 9 ft bgs</li> <li>PCE, vinyl chloride, and 1,2-DCA in soil at detection limits above the proposed remedial goals at B-22 and B-25</li> <li>TCE above proposed remedial goal in groundwater at B-14 at least 6 to 15 ft bgs</li> <li>Vinyl chloride above proposed remedial goal in groundwater at B-14, B-22, and B-25 at least 6 to 15 ft bgs</li> </ul>	<ul style="list-style-type: none"> <li>Indoor Air (Soil and GW)</li> <li>Direct Exposure (Soil)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 95' (W) x 67' (L) x 12' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Excavation of soil in saturated zone containing soil or groundwater above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (Cal Haz) or Class II landfill</li> <li>Groundwater extraction and ex-situ treatment of groundwater in open excavation pit</li> <li>If necessary, open pit application of a hydrogen donor in a Class II permeable backfill along with subsequent post-backfill injections.</li> <li>Backfill</li> </ul>
Former TCA Tank and Drum Storage Area	<ul style="list-style-type: none"> <li>TCE above proposed remedial goal in soil at OS-2, CW-1, B-7, and API1-B1 at least 8.5 feet bgs</li> <li>PCE above proposed remedial goal in soil at OS-2, CW-1, B-2, B-3, and API-B1 at least 8.5 feet bgs</li> <li>1,1-DCE above proposed remedial goal in soil at B-7 at least 4 ft bgs</li> <li>PCE above proposed remedial goal in groundwater at GP-2 at least 6 to 15 ft bgs; numerous detections of TCE and numerous samples with detection limits above the proposed remedial goal for vinyl chloride</li> <li>TCE above proposed remedial goal in soil gas at SG-4 and SG-5 at 2 ft bgs</li> <li>PCE above proposed remedial goal in soil gas at SG-4 and SG-5 at 2 ft bgs</li> <li>Vinyl chloride above proposed remedial goal in soil gas at SG-4 at 2 ft bgs</li> <li>1,1-DCA above proposed remedial goal in soil gas at SG-4 at 2 ft bgs</li> <li>1,1-DCE above proposed remedial goal in soil gas at SG-4 at 2 ft bgs</li> </ul>	<ul style="list-style-type: none"> <li>Indoor Air (Soil and GW)</li> <li>Direct Exposure (Soil)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 70' (W) x 43' (L) x 12' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Excavation of soil in saturated zone containing soil or groundwater above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (Cal Haz) or Class II landfill</li> <li>Groundwater extraction and ex-situ treatment of groundwater in open excavation pit</li> <li>If necessary, open pit application of a hydrogen donor in a Class II permeable backfill along with subsequent post-backfill injections.</li> <li>Backfill</li> </ul>

**Table 5**  
**Summary of Known Areas of Concern and Remedial Approach**

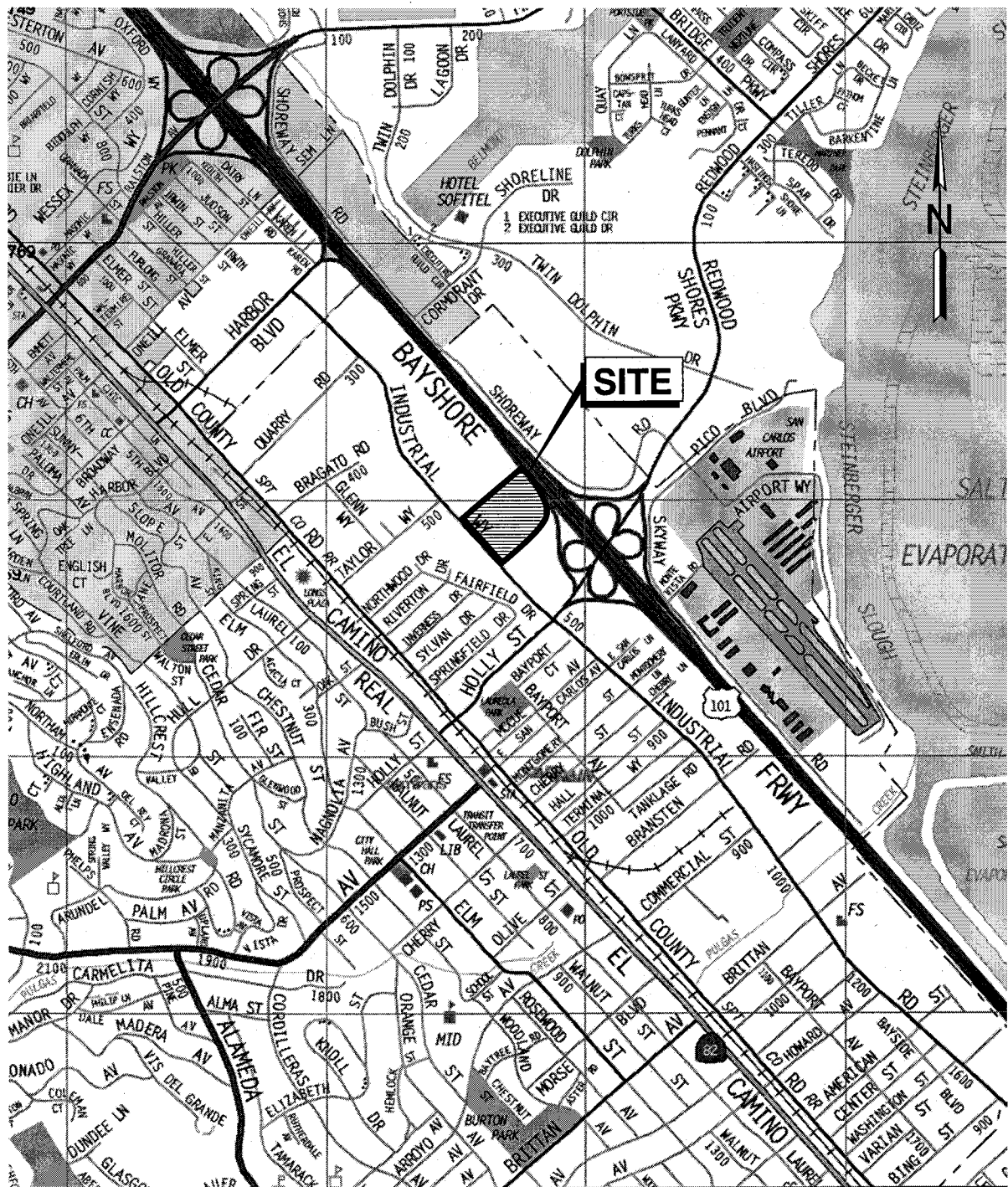
Name of Area	Chemicals of Potential Concern	Primary Risk Drivers	Proposed Mitigation Methods
Former Gasoline UST Excavation Area	<ul style="list-style-type: none"> <li>Benzene above proposed remedial goal in soil at B-1, B-17, and B-20 at least 11.5 ft bgs, ethylbenzene and xylenes also above proposed remedial goals in soil at B-1</li> <li>Benzene above proposed remedial goal in groundwater at B-1 and B-17 at least 6 to 15 ft bgs, toluene, ethylbenzene, and xylenes also above proposed remedial goals in groundwater at B-1 and B-17</li> <li>TPH-gasoline above proposed remedial goal in soil</li> </ul>	<ul style="list-style-type: none"> <li>Indoor Air (Soil and GW)</li> <li>Direct Exposure (Soil)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 54' (W) x 60' (L) x 12' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Excavation of soil in saturated zone containing soil or groundwater above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (Cal Haz) or Class II landfill</li> <li>Groundwater extraction and ex-situ treatment of groundwater in open excavation pit</li> <li>If necessary, open pit application of an oxidant in a Class II permeable backfill along with subsequent post-backfill injections.</li> <li>Backfill</li> </ul>
Electrical Transformer Area	<ul style="list-style-type: none"> <li>PCBs above proposed remedial goal in soil at B-5 at least 0.5 ft bgs</li> <li>TPH-diesel and TPH-motor oil above proposed goal in soil at B-5 at least 0.5 ft bgs</li> </ul>	<ul style="list-style-type: none"> <li>Direct Exposure (Soil)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 17' (W) x 23' (L) x 6' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (Cal Haz) or Class II landfill</li> <li>Backfill</li> </ul>
Hazardous Waste Storage Area (Shed B)	<ul style="list-style-type: none"> <li>TCE above proposed remedial goal in soil at SWMU23-B4 at least 3.5 ft bgs</li> <li>Chromium above proposed remedial goal in soil at B-5 at least 4 ft bgs</li> </ul>	<ul style="list-style-type: none"> <li>Indoor Air (Soil)</li> <li>Direct Exposure (Soil)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 25' (W) x 32' (L) x 6' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (Cal Haz) or Class II landfill</li> <li>Backfill</li> </ul>
Hazardous Waste Storage Area (Shed C)	<ul style="list-style-type: none"> <li>TCE above proposed remedial goal in soil at C-1 and C-3 at least 6 ft bgs</li> <li>PCE above proposed remedial goal in soil at SWMU23-B6, C-1, and C-3 at least 6 ft bgs</li> </ul>	<ul style="list-style-type: none"> <li>Indoor Air (Soil)</li> <li>Direct Exposure (Soil)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 37' (W) x 43' (L) x 6' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (Cal Haz) or Class II landfill</li> <li>Backfill</li> </ul>
Former Evaporation Ponds Area	<ul style="list-style-type: none"> <li>Chromium above proposed remedial goal in soil at NGB-5 and NGB-6 at least 3.5 ft bgs</li> <li>Nickel above proposed remedial goal in soil at NGB-5 and NGB-6 at least 3.5 ft bgs</li> </ul>	<ul style="list-style-type: none"> <li>Direct Exposure (Soil)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated excavation dimensions of 50' (W) x 80' (L) x 4' (D)</li> <li>Excavation of soil in unsaturated zone above proposed remedial goals</li> <li>Off-site disposal of soil as necessary at a Class I (Cal Haz) or Class II landfill</li> </ul>

**Table 6**  
**Sampling Plan**  
**301 Industrial Way, San Carlos, California**

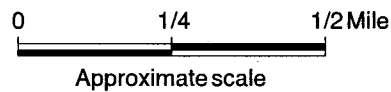
Sample Type	Frequency	Comments
Pre-excavation Soil	step-out samples 10 to 25 feet beyond known affected areas	samples will be collected at approximately 3-, 6-, and 9-foot intervals
Excavation Floors Soil	1 sample every 900 to 2,500 sq feet	
Excavation Sidewalls Soil	1 sample every 25 to 50 linear feet	samples will be collected approximately every 3 feet vertically
Water in Excavations	1 sample of water entering excavation per excavation area 1 sample/10,000 gal for treatment/disposal purposes	sampling frequency may be adjusted based on seepage rate into excavation area. sampling frequency may be adjusted based on offsite disposal facility requirements.
Post Excavation VOC Soil Gas Sampling	samples every 10 to 20 feet along excavation sidewalls	Field screening using PID or FID at approximately 2- and 5-foot depth intervals.
Stockpiled Soil	1 sample/750 to 1500 cubic yards	sampling frequency will be based on offsite disposal facility criteria, as required.

**Notes:**

- (a) Chemical analyses may include VOCs, TPH (gas, diesel, and motor oil), metals, PCBs, and cyanide. Specific analyses will be selected based on the identified chemicals of concern for each excavation area. Sampling and analytical methods used for samples collected for laboratory analysis will have sufficient sensitivity to confirm whether or not remedial goals have been met.
- (b) Sampling frequency will be based on the size and heterogeneity of excavation areas
- (c) Soil samples may be screened for VOCs in field using PID or FID



Base map: The Thomas Guide, San Mateo County, 1999



**Figure 1**  
**Site Location**

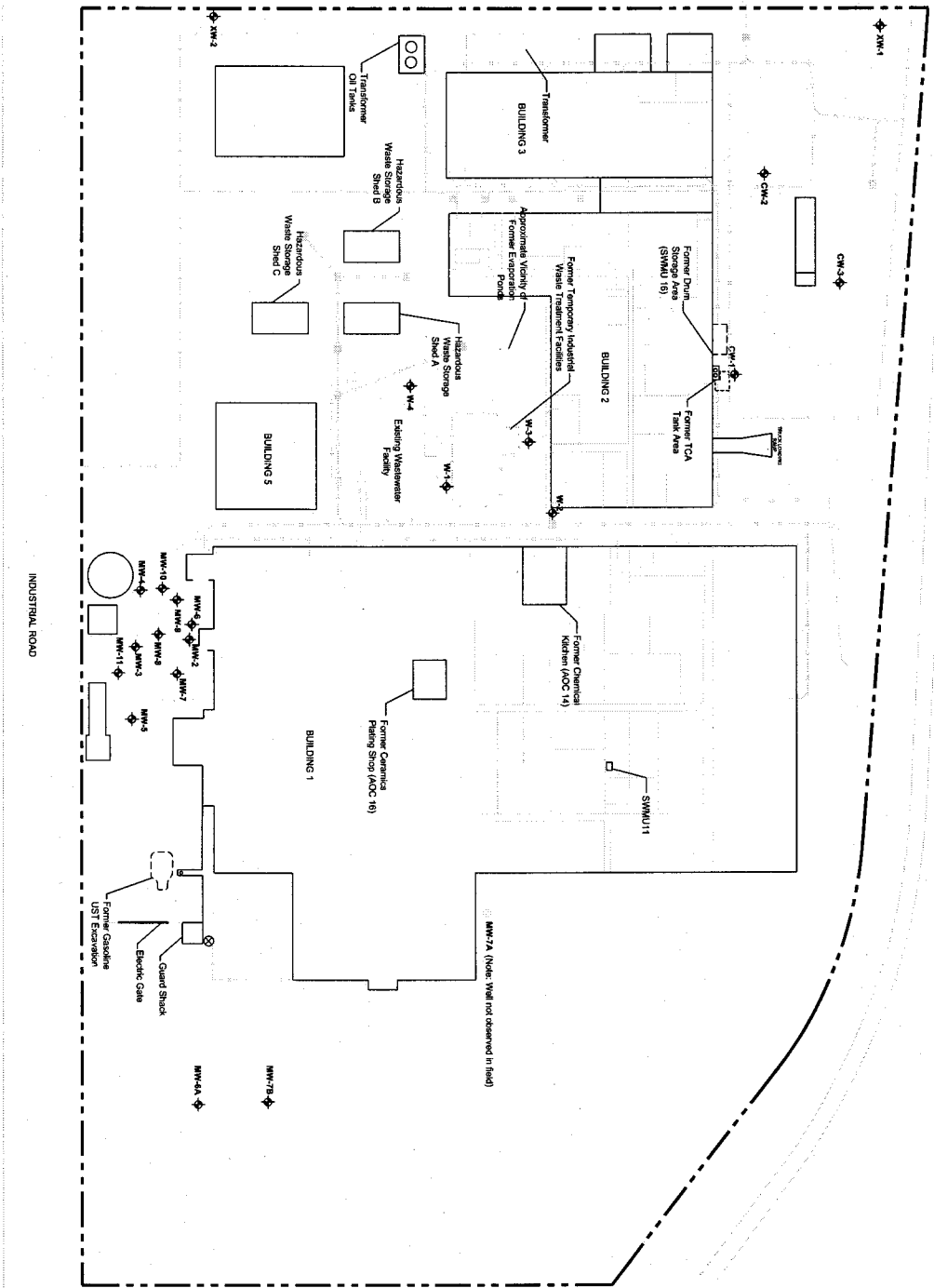
301 Industrial Road  
San Carlos, California  
June 16, 2004  
Proj. No. 1100.01



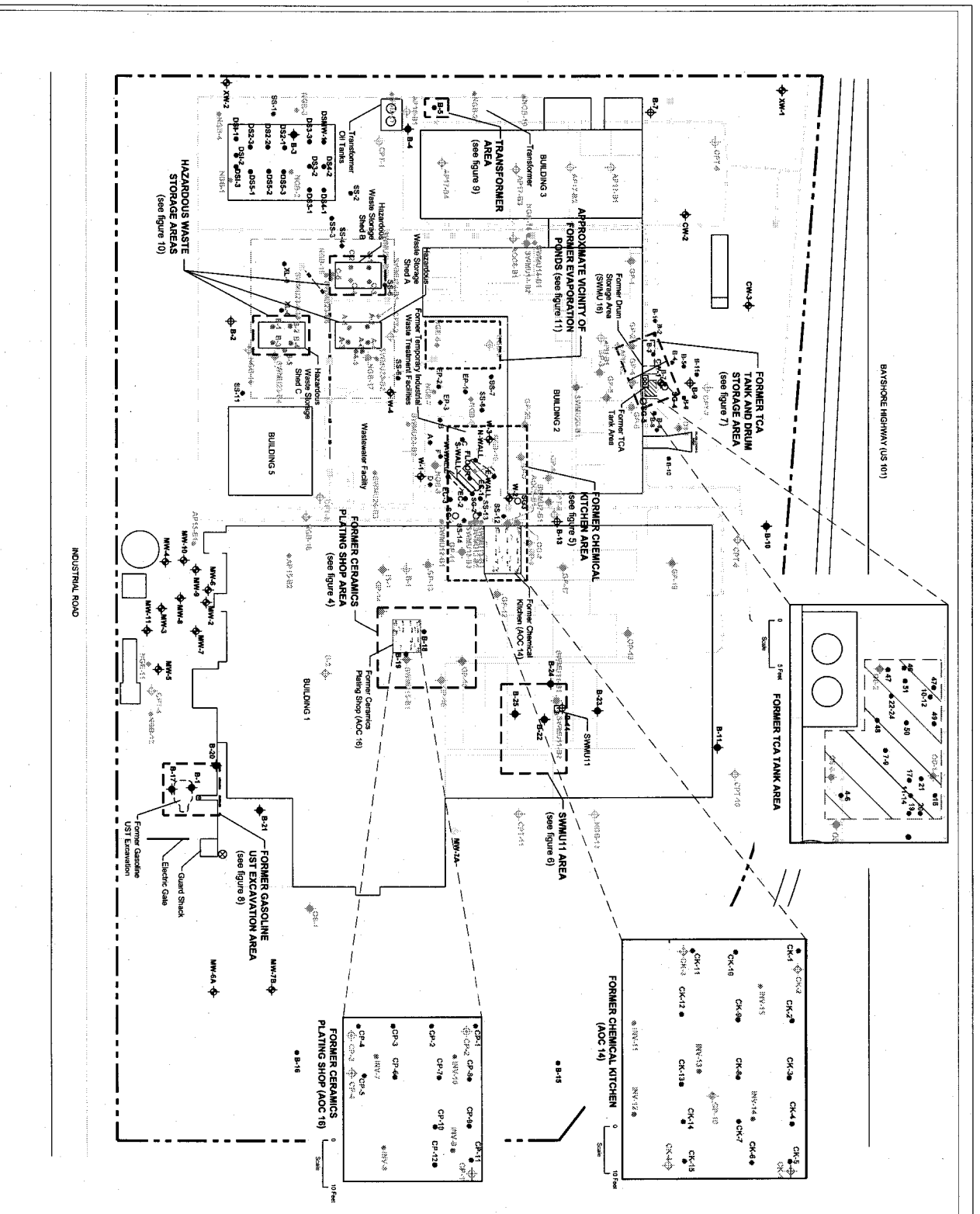
**northgate**  
**environmental**  
**management, inc**

BAYSHORE HIGHWAY (US 101)

**EXPLANATION**  
 CW-1 Existing monitoring well



**Figure 2**  
**SITE PLAN**  
 301 Industrial Road,  
 San Carlos, California  
 June 16, 2004  
 Proj. No. 1100.01



#### EXPLANATION

- ◊ MW-1 Existing monitoring well
- ◊ MW-14 Monitoring well not located
- Storm drain system
- Power Line
- ◊ B-2 Treated & Bore groundwater sampling location 2002/2003
- ◊ B-10 Treated & Bore soil and groundwater sampling location 2002/2003
- ◊ B-3 Treated & Bore soil and gas sampling location (2-foot deep) 2002/2003
- B-4 Treated & Bore soil and gas sampling location 2002/2003
- ◊ B-11 Northgate Environmental Inc. (NENI) Borehole 2004
- ◊ B-12 Northgate Environmental Inc. (NENI) Borehole 2004
- ◊ B-13 Kennedy & Elzy soil sampling location 1985
- ◊ B-14 Kennedy & Elzy soil sampling location 1985
- ◊ B-15 Washington Cycle groundwater sampling location 1984
- ◊ B-16 Perigen soil sampling location 1982
- ◊ B-17 Perigen groundwater sampling location 1982
- ◊ B-18 Washington Cycle groundwater sampling location 1984
- ◊ B-19 Perigen groundwater sampling location 1982
- ◊ B-20 Perigen groundwater sampling location 1982
- ◊ B-21 Perigen groundwater sampling location 1982
- ◊ B-22 Perigen groundwater sampling location 1982
- ◊ B-23 Perigen groundwater sampling location 1982
- ◊ B-24 Perigen groundwater sampling location 1982
- ◊ B-25 Perigen groundwater sampling location 1982
- ◊ B-26 Perigen groundwater sampling location 1982
- ◊ B-27 Perigen groundwater sampling location 1982
- ◊ B-28 Perigen groundwater sampling location 1982
- ◊ B-29 Perigen groundwater sampling location 1982
- ◊ B-30 Perigen groundwater sampling location 1982
- ◊ B-31 Perigen groundwater sampling location 1982
- ◊ B-32 Perigen groundwater sampling location 1982
- ◊ B-33 Perigen groundwater sampling location 1982
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- ◊ B-36 Perigen groundwater sampling location 1982
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- ◊ B-39 Perigen groundwater sampling location 1982
- ◊ B-40 Perigen groundwater sampling location 1982
- ◊ B-41 Perigen groundwater sampling location 1982
- ◊ B-42 Perigen groundwater sampling location 1982
- ◊ B-43 Perigen groundwater sampling location 1982
- ◊ B-44 Perigen groundwater sampling location 1982
- ◊ B-45 Perigen groundwater sampling location 1982
- ◊ B-46 Perigen groundwater sampling location 1982
- ◊ B-47 Perigen groundwater sampling location 1982
- ◊ B-48 Perigen groundwater sampling location 1982
- ◊ B-49 Perigen groundwater sampling location 1982
- ◊ B-50 Perigen groundwater sampling location 1982
- ◊ B-51 Perigen groundwater sampling location 1982
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- ◊ B-97 Perigen groundwater sampling location 1982
- ◊ B-98 Perigen groundwater sampling location 1982
- ◊ B-99 Perigen groundwater sampling location 1982
- ◊ B-100 Perigen groundwater sampling location 1982

0' 50' 100'  
SCALE 1" = 50'

**Figure 3**  
**PROPOSED**  
**REMEDIATION ZONES**  
301 Industrial Road,  
San Carlos, California  
June 16, 2004  
Proj. No. 1100.01

# EXPLANATION

• Treadwell & Rollo soil sampling location 2002/2003

◊ Woodward Clyde groundwater sampling location 1984

● Perimeter Radon and sampling location 1992

● Perimeter soil sampling location 1992

◊ Adjacent to radon well and groundwater sampling location 1984 and 1989

◊ Northgate Emergency response and groundwater sampling location 2003

▭ Proposed Remediation Zone (dimensions approximate)

## ABBREVIATIONS

NR(X)= reported below detection limit

NT= not tested/analyzed

T&R 03= Treadwell & Rollo in 2003

NG3 03= Third Northgate investigation in 2003

MW RF 95= Montgomery Watson RFI in 1995

MW CR 95= Montgomery Watson closure report in 1994

W-C 94= Woodward Clyde investigation in 1994

Notes:

1. All ground water results reported in micrograms per liter (µg/l);

2. All soil sample results reported in milligrams per kilogram (mg/kg).

0' 10' 20'  
SCALE 1" = 10'

## Figure 4 FORMER CERAMICS PLATING SHOP AREA

301 Industrial Road,  
San Carlos, California  
June 16, 2004  
Proj. No. 1100.01



## Soil Sampling Results:

Approved Remedial Goal for Benzene to 500																
Sample ID	Location	Depth	Soil Type	Asbestos (ppm)	Lead (ppb)	Cadmium (ppb)	Chromium (ppb)	Copper (ppb)	Mercury (ppb)	Vanadium (ppb)	Barium (ppb)	Strontium (ppb)	Thallium (ppb)	Remedial Goal		
														Asbestos (ppm)	Lead (ppb)	
Sample ID	Location	Depth	Soil Type	Asbestos (ppm)	Lead (ppb)	Cadmium (ppb)	Chromium (ppb)	Copper (ppb)	Mercury (ppb)	Vanadium (ppb)	Barium (ppb)	Strontium (ppb)	Thallium (ppb)	Antimony (ppb)	Fluoride (ppb)	Other
CP-1	SWMU 15	0-15"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-2	SWMU 15	15-30"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-3	SWMU 15	30-45"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-4	SWMU 15	45-60"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-5	SWMU 15	60-75"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-6	SWMU 15	75-90"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-7	SWMU 15	90-105"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-8	SWMU 15	105-120"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-9	SWMU 15	120-135"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-10	SWMU 15	135-150"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-11	SWMU 15	150-165"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-12	SWMU 15	165-180"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-13	SWMU 15	180-195"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-14	SWMU 15	195-210"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-15	SWMU 15	210-225"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-16	SWMU 15	225-240"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-17	SWMU 15	240-255"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-18	SWMU 15	255-270"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-19	SWMU 15	270-285"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-20	SWMU 15	285-300"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-21	SWMU 15	300-315"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-22	SWMU 15	315-330"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-23	SWMU 15	330-345"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-24	SWMU 15	345-360"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-25	SWMU 15	360-375"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-26	SWMU 15	375-390"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-27	SWMU 15	390-405"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-28	SWMU 15	405-420"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-29	SWMU 15	420-435"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-30	SWMU 15	435-450"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-31	SWMU 15	450-465"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-32	SWMU 15	465-480"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-33	SWMU 15	480-495"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-34	SWMU 15	495-510"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-35	SWMU 15	510-525"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-36	SWMU 15	525-540"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-37	SWMU 15	540-555"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-38	SWMU 15	555-570"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-39	SWMU 15	570-585"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-40	SWMU 15	585-600"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-41	SWMU 15	600-615"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-42	SWMU 15	615-630"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-43	SWMU 15	630-645"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-44	SWMU 15	645-660"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-45	SWMU 15	660-675"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-46	SWMU 15	675-690"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-47	SWMU 15	690-705"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-48	SWMU 15	705-720"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-49	SWMU 15	720-735"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-50	SWMU 15	735-750"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-51	SWMU 15	750-765"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-52	SWMU 15	765-780"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-53	SWMU 15	780-795"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-54	SWMU 15	795-810"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-55	SWMU 15	810-825"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-56	SWMU 15	825-840"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-57	SWMU 15	840-855"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-58	SWMU 15	855-870"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-59	SWMU 15	870-885"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-60	SWMU 15	885-900"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-61	SWMU 15	900-915"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-62	SWMU 15	915-930"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-63	SWMU 15	930-945"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-64	SWMU 15	945-960"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-65	SWMU 15	960-975"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-66	SWMU 15	975-990"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-67	SWMU 15	990-1005"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-68	SWMU 15	1005-1020"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-69	SWMU 15	1020-1035"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-70	SWMU 15	1035-1050"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-71	SWMU 15	1050-1065"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-72	SWMU 15	1065-1080"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-73	SWMU 15	1080-1095"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-74	SWMU 15	1095-1110"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-75	SWMU 15	1110-1125"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-76	SWMU 15	1125-1140"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-77	SWMU 15	1140-1155"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-78	SWMU 15	1155-1170"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-79	SWMU 15	1170-1185"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-80	SWMU 15	1185-1200"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-81	SWMU 15	1200-1215"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-82	SWMU 15	1215-1230"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-83	SWMU 15	1230-1245"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-84	SWMU 15	1245-1260"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-85	SWMU 15	1260-1275"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-86	SWMU 15	1275-1290"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-87	SWMU 15	1290-1305"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-88	SWMU 15	1305-1320"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-89	SWMU 15	1320-1335"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-90	SWMU 15	1335-1350"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-91	SWMU 15	1350-1365"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-92	SWMU 15	1365-1380"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-93	SWMU 15	1380-1395"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-94	SWMU 15	1395-1410"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-95	SWMU 15	1410-1425"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-96	SWMU 15	1425-1440"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-97	SWMU 15	1440-1455"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-98	SWMU 15	1455-1470"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-99	SWMU 15	1470-1485"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CP-100	SWMU 15	1485-1500"	CL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

**EXPLANATION**

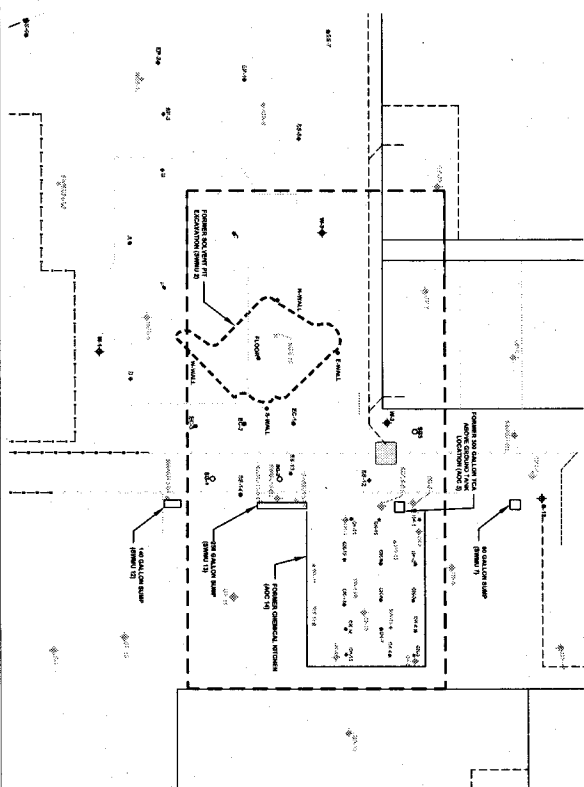
Existing monitoring  
Monitoring well not

[illegible]


## e 93 = Cancrie invest

[illegible]

## Dr.

[illegible]

**Figure 5**  
**FORMER CHEMICAL**  
**KITCHEN AREA**  
301 Industrial Road,  
San Carlos, California  
June 16, 2004  
Proj. No. 1100.01



**northgate  
environmental  
management, inc.**

- [illegible]

### ABBREVIATIONS

NDO's reported below detection limit were not reported.

NDG-01 tested negative

NGD-01 Second Northgate investigation in 2003

NGD-03 Third Northgate investigation in 2003

NGD-05 First Northgate investigation in 2003

MW RFI-5 Montgomery Wilson RFI in 1985

MW RFI-6 Montgomery Wilson RFI Field Investigation in 1996

MW RFI-7 Montgomery Wilson RFI Field Investigation in 1994

M-C-4 Woodland Circle investigation in 1984

M-C-5 Woodland Circle investigation in 1984

MW RFI-1 Montgomery Wilson Additional Field Investigation in 1985

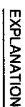
MW RFI-1 Montgomery Wilson RCRA Facility Investigation in 1995

Noises:

A1 Ground water results reported in micrograms per liter (µg/L).

A2 Soil sample results reported in milligrams per kilogram (mg/kg).

A3 Soil sample results reported in milligrams per kilogram (mg/kg).

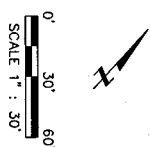
[illegible][illegible]

- ◆ Treatwell & Rolio groundwater sampling location 2002/2003
- Treatwell & Rolio soil sampling location 2002/2003
- ◆ Treatwell & Rolio soil and groundwater sampling location 2002/2003
- ◆ Rathfriland Estate groundwater and groundwater sampling location 2003
- ◆ Rathfriland Environmental groundwater sampling location 2002/2003
- ◆ Rathfriland & Wicks groundwater sampling location 1994 and 1995
- ◆ Rathfriland & Wicks groundwater sampling location 1994 and 1995
- ◆ Proposed Remediation Zone (dimensions approximate)

MD(x)= reported below detection limit  
NR= not reported

- NI = Not tested/analyzed  
T&R 03 = Treadwell & Rollo in 2003  
NG1 03 = First Northgate investigation in 2003  
NG2 03 = Second Northgate investigation in 2003  
NG3 03 = Third Northgate investigation in 2003  
MW RFI 95 = Montgomery Watson RFI in 1995

1. All ground water results reported in micrograms per liter ( $\mu\text{g/l}$ );
2. All soil sample results reported in milligrams per kilogram ( $\text{mg/kg}$ );
3. SWMU11-B1 was only tested for metals; all metals were reported below detection limits.

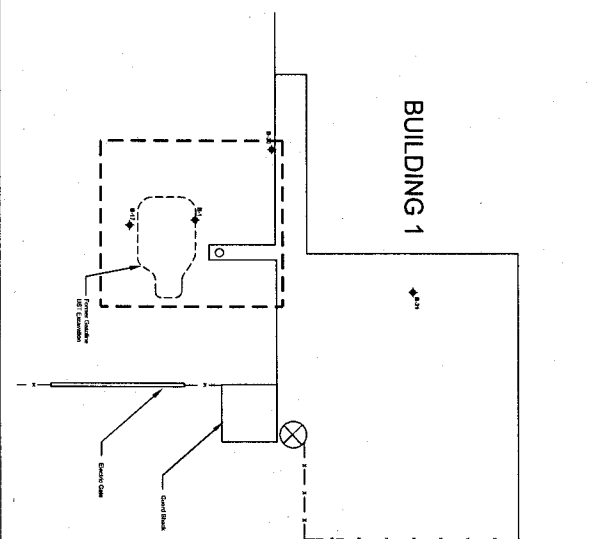


**Figure 6**  
**SWMU 11 AREA**  
301 Industrial Road,  
San Carlos, California  
June 16, 2004  
Proj. No. 1100.01

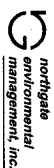


[illegible][illegible]

Proposed Remedial Goal for VOCs in Groundwater						Borehole	Total Ethylbenzene	Total Styrene
Sample ID	Date	Depth	Reference	Detects	Ethylbenzene	Totals		
18T						4000	7700 E	5600
91T-GW	11/23/2002	6.15	154.03			1600		
91T-GW	12/19/2002	6.15	154.03			1600	1300	1200
92T-GW	12/19/2002	6.15	154.03			ND (0.3)	3.4	3.1
93T-GW	12/19/2002	6.15	154.03			ND (0.3)	2.2	ND (0.3)
94T-GW	12/19/2002	6.15	154.03			ND (0.3)	0.7	ND (0.3)



**Figure 8**  
**FORMER GASOLINE UST**  
**EXCAVATION AREA**  
301 Industrial Road,  
San Carlos, California  
June 16, 2004  
Proj. No. 1100.01



Treadwell & Folio soil and groundwater sampling location 2002/2003



ND(x)= reported below detection limit  
NR= not reported  
NT= not tested/ analyzed  
T&R 03= Treadwell & Rollo in 2003

**Notes:**

1. All ground water results reported in micrograms per liter ( $\mu\text{g/l}$ );
2. All soil sample results reported in milligrams per kilogram ( $\text{mg/kg}$ ).



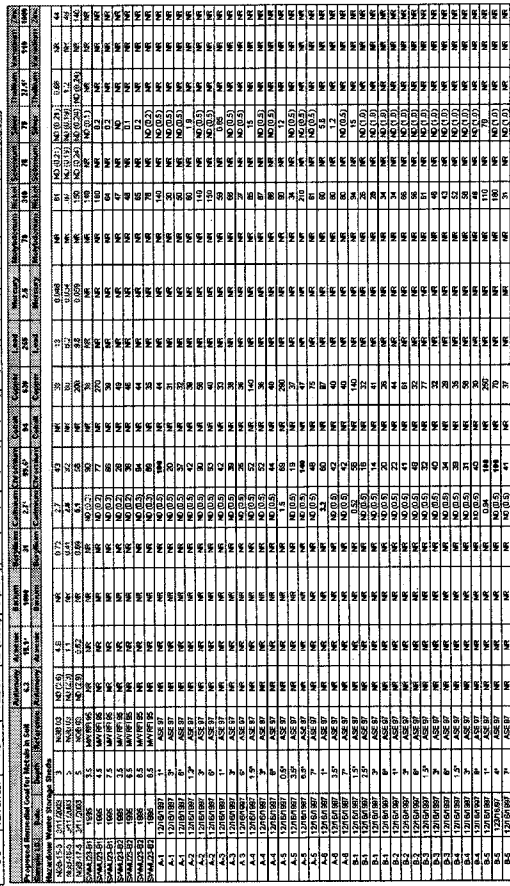
[illegible][illegible]

Storm drain system  
Sewer Line  
Fence  
Transitwell & role groundwater sampling location  
2002/2003  
Existing monitoring well  
B-2  
CW-1  
Natchitoches River mouth site and groundwater sampling (March 2003)  
Natchitoches River mouth site and groundwater sampling (March 2004)  
Natchitoches River mouth site and groundwater sampling (March 2005)  
Natchitoches River mouth site and groundwater sampling (March 2006)  
Natchitoches River mouth site and groundwater sampling (March 2007)  
Natchitoches River mouth site and groundwater sampling (March 2008)  
Natchitoches River mouth site and groundwater sampling (March 2009)  
Natchitoches River mouth site and groundwater sampling (March 2010)  
Natchitoches River mouth site and groundwater sampling (March 2011)  
Natchitoches River mouth site and groundwater sampling (March 2012)  
Natchitoches River mouth site and groundwater sampling (March 2013)  
Natchitoches River mouth site and groundwater sampling (March 2014)  
Natchitoches River mouth site and groundwater sampling (March 2015)  
Natchitoches River mouth site and groundwater sampling (March 2016)  
Natchitoches River mouth site and groundwater sampling (March 2017)  
Natchitoches River mouth site and groundwater sampling (March 2018)  
Natchitoches River mouth site and groundwater sampling (March 2019)  
Natchitoches River mouth site and groundwater sampling (March 2020)  
Natchitoches River mouth site and groundwater sampling (March 2021)  
Natchitoches River mouth site and groundwater sampling (March 2022)  
Natchitoches River mouth site and groundwater sampling (March 2023)  
Natchitoches River mouth site and groundwater sampling (March 2024)  
Natchitoches River mouth site and groundwater sampling (March 2025)  
Natchitoches River mouth site and groundwater sampling (March 2026)  
Natchitoches River mouth site and groundwater sampling (March 2027)  
Natchitoches River mouth site and groundwater sampling (March 2028)  
Natchitoches River mouth site and groundwater sampling (March 2029)  
Natchitoches River mouth site and groundwater sampling (March 2030)

## reported below detection limit

NR= not reported  
NT= not tested/ analyzed  
T&R 03= Treadwell & Rollo in 2003  
NG2 03= Second Northgate investigation  
NG3 03= Third Northgate investigation  
MW RF1 95 = Montgomery Watson RF1  
ASE 97 = Aqua Sciences investigation

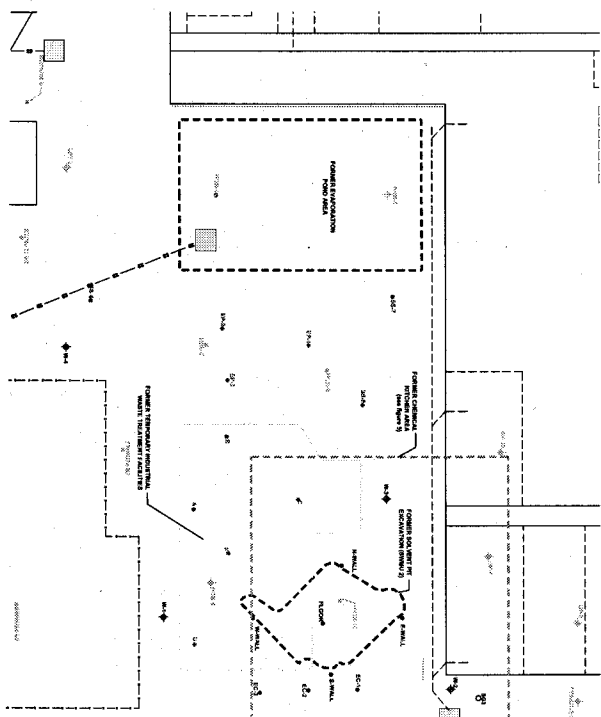
1. All ground water results reported in micrograms per liter (µg/l);  
2. All soil sample results reported in milligrams per kilogram (mg/kg).



**Figure 10**  
**HAZARDOUS MATERIAL**  
**STORAGE AREA**  
301 Industrial Road,  
San Carlos, California  
June 16, 2004  
Proj. No. 1100.01



**northgate  
environmental  
management, inc.**

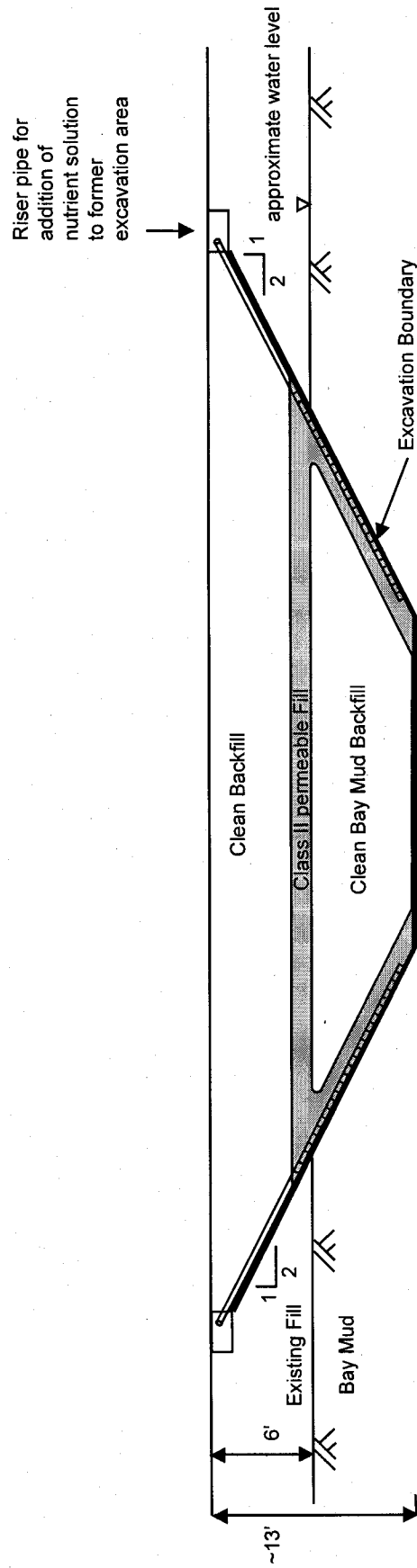
[illegible][illegible]

	<p>EW-1 Monitoring well located</p>
	<p>Storm drain system</p>
	<p>Sewer Line</p>
	<p>French</p>
	<p>B-2 Treated &amp; Rolo groundwater sampling location 2002/2003</p>
	<p>B-10 Treated &amp; Rolo soil and sampling location 2002/2003</p>
	<p>B-3 Treated &amp; Rolo soil and groundwater sampling location 2002/2003</p>
	<p>OS-4 Treated &amp; Rolo soil and gas sampling location (2nd test) 2004/2005</p>
	<p>Yokohama Environmental and Sampling Location 2003 Yokohama Environmental and Sampling Location 2003 Yokohama Environmental and Sampling Location 2003 Yokohama Environmental and Sampling Location 2003</p>
	<p>Kennedy Jinks soil sampling location 1985 McNeill &amp; Pelly soil sampling location 1982</p>
	<p>Woodward Clyde groundwater sampling location 1986</p>
	<p>Purinton soil sampling location 1992</p>
	<p>Environmental and Sampling Location 1992 Environmental and Sampling Location 1992 Environmental and Sampling Location 1992 Environmental and Sampling Location 1992</p>
	<p>1994 1995 1995 1994 1995 1995 1994 1995 1995 1994 1995 1995</p>
	<p>1994 1995 1995 1994 1995 1995 1994 1995 1995 1994 1995 1995</p>
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	<p>1994 1995 1995 1994 1995 1995 1994 1995 1995 1994 1995 1995</p>
	<p>1994 1995 1995 1994 1995 1995 1994 1995 1995 1994 1995 1995</p>

ND(x)= reported below detection limit  
NR = not reported  
NT = not tested/analyzed  
NG2 03= Second Northgate investigation in 2003

**Figure 11**  
**FORMER EVAPORATION**  
**POND AREA**

3301 Industrial Road,  
San Carlos, California  
June 16, 2004  
Proj. No. 1100.01



**FIGURE 12**  
**Typical Excavation and Backfill Cross-Section**

**APPENDIX A**

**REGULATORY APPROVAL LETTERS**

- 1) **Recommendation for No Further Action (DTSC, 7/21/1998)**
- 2) **Closure Certification Approval for CPI (DTSC, 12/31/1997)**
- 3) **Former Varian Power Grid Tube Products Facility, Closure of Former Chemical Kitchen  
(Cal-EPA/RWQCB, 12/24/1996)**
- 4) **Closure of Sumps SWMU 14 and SWMU 15, Former Varian Power Grid Tube Products  
(San Mateo County Health Services Agency, 1/16/1996)**
- 5) **Approval of RCRA Facility Investigation Report for Varian Power Grid Tube Products  
(DTSC, 7/31/1995)**
- 6) **Closure of Former Drum Storage Area and Cleanup of Former Solvent Pit and Former Evaporation  
Ponds (DTSC, 8/14/1985)**

**Recommendation for No Further Action**

Communications and Power Industries  
301 Industrial Way  
San Carlos, CA 94070  
CUPA: San Mateo County  
Contact: Tom Huynh, Safety Representative

#### **MEDIUM PRIORITY FURTHER INVESTIGATION NEEDED**

Date Assigned: July 7, 1998  
File Review: July 8, 1998  
Site Visit: July 15, 1998  
Meetings/Misc: July 8, 1998 call  
FIS OK date: July 15, 1998  
Case Closure: July 15, 1998

#### **TYPE OF OPERATION/POTENTIAL CONTAMINANTS**

A manufacturer of cathode ray tubes used in radar and other equipment. Metals from plating operations are produced as hazardous waste.

#### **Phone Call 7/8/98**

I talked with Mr. Jim Millie, a consultant for Communications and Power Industries about a date that I would be able to do a walkthrough inspection of this facility. He also told me that an RCRA Facility Assessment had been done at this site with cleanup action completed and approved.

#### **Chronology of Events/History of Site**

The first buildings at this site were constructed in 1956-57. In 1965 Varian bought the site and started production. Communications and Power Industries (CPI) bought the Varian production operation of cathode ray tubes in 1995.

A phase one was submitted in June 1998 indicating one area of concern (AOC). The one area of concern was where a large industrial oven stood. When the oven was removed, three concrete lined holes were found that allowed room for three hydraulic arms to move vertically.

#### **Notes (from visits/calls/meetings):**

##### **7/15/98 Site Visit**

I met with Tom Huynh, Safety Representative of (CPI) and Jim Mille, consultant of Chemical Solutions. In the main production building taped off with yellow warning tape was located the AOC. On the floor were three holes covered with metal grates. I looked into the hole and observed standing water in all three holes and a cement bottom and metal lined sides. Mr. Mille and Mr. Huynh explained to me that the standing water was still present from a leak test that was

done. They also showed me where a boring of cement had been done next to one of the holes to find out the thickness of the cement structure around the holes. From the boring it appeared that at least one foot of concrete surrounded these holes. I asked if very much hydraulic fluid was found inside any of the holes and Mr. Millie told me that some residual amounts were found that were cleaned out.

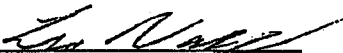
We next went outside the building to the PBR treatment unit which treats metals from the plating that is done in the production process. The treatment unit had secondary containment that was P.E. certified.

I asked if I could review the submittals and work that was done for the cleanup. In a file room I looked at the RCRA Facility Assessment for CPI that was done June 1994. This assessment was done by DTSC Region 2 office and identified 24 solid waste management units (SWMU) and 10 areas of concern (AOC). Of this Total, 7 SWMU's and 3 AOC's were deemed to need further investigation. Samples were taken and a June 1995 Montgomery Watson report recommended closure of the 7 SWMU's and 3 AOC's. Mr. Mille said that all the SWMU's and AOC's were approved for closure by the County of San Mateo or DTSC.

#### **RECOMMENDATIONS/REASONS FOR NO FURTHER INVESTIGATION OR CORRECTIVE ACTION**

I talked with Sal Ciriello of Department of Toxic Substances Control Permitting Division and verified that DTSC had approved the RFI report and CPI is now considered closed. All oversite for cleanup was done by DTSC or the County of San Mateo, Environmental Health. The three concrete lined holes appeared to be clean and leak testing did not reveal any breakthrough in containment. Based on information provided by CPI and DTSC, I recommend that no further investigation or corrective action be done at this time.

7/21/98  
Date

  
Leo Valdez  
Hazardous Substances Scientist  
Dept. of Toxic Substances Control

**Closure Certification Approval for CPI**

Cal/EPA

Department of  
Toxic Substances  
Control

700 Hellz Avenue  
Suite 200  
Berkeley, CA  
94710-2737

Mr. Tom Huynh  
Environmental & Safety Engineer  
CPI-Eimac  
301 Industrial Way  
San Carlos, CA 94070-2682

Dear Tom Huynh:

**CLOSURE CERTIFICATION APPROVAL FOR COMMUNICATIONS &  
POWER INDUSTRIES, INC., EIMAC DIVISION, 301 INDUSTRIAL  
WAY, SAN CARLOS, EPA ID NO. CAD 009 438 300**

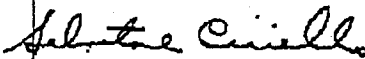
The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), has received the closure certification report dated December 23, 1997 for Communications and Power Industries, Inc., Eimac Division (CPI-Eimac). This report certifies that the closure of the permitted hazardous waste storage areas, Sheds A, B and C, were performed in accordance with the approved closure plan.

We hereby approve your closure certification report and now consider these storage areas at CPI-Eimac officially closed. We understand that the permitted treatment units are now regulated under Permit-By-Rule authorization. The permit for this facility is no longer in effect.

This acknowledgment of facility closure does not remove any liabilities associated with past hazardous waste management practices which may have occurred at the site.

If you have any questions, please contact Alfred Wong of my staff at (510) 540-3946.

Sincerely,



For James M. Pappas, P.E., Chief  
Northern California Permitting  
Branch

cc: See next page



Pete Wilson  
Governor

James M. Pappas  
Secretary for  
Environmental  
Protection



Printed on Recycled Paper

Mr. Tom Huynh  
December 31, 1997  
Page 2

cc: Mr. John McCarroll  
U.S. EPA, Region IX, H-3  
75 Hawthorne Street  
San Francisco, California 94105

Mr. Alfred Wong  
Northern California Branch  
Permitting Division  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710

Ms. Charlene Williams, Chief  
Northern California Branch  
Statewide Compliance Division  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710

**Former Varian Power Grid Tube Products Facility,  
Closure of Former Chemical Kitchen**



San Francisco Bay  
Regional Water  
Quality Control  
Board

2101 Webster Street  
Suite 500  
Oakland, CA 94612  
(510) 286-1255  
FAX (510) 286-1380

SAN MATEO COUNTY  
ENVIRONMENTAL HEALTH

JAN - 9 1997

**RECEIVED**

Date: December 24, 1996  
File No: 2189.8291 (RAD)



Pete Wilson  
Governor

Mr. John Buchanan  
Varian Associates  
3120 Hansen Way  
Palo Alto, CA 94304

SUBJECT: Former Varian Power Grid Tube Products Facility  
301 Industrial Way  
San Carlos, San Mateo County  
Closure of Former Chemical Kitchen

Dear Mr. Buchanan:

Board staff has reviewed your report, dated August 22, 1996 for the above site. The report evaluates the remaining chemicals and associated risks in the former chemical kitchen, and recommends closure for this part of the site. As explained below, I concur that additional investigations in the chemical kitchen area are not needed until the land use changes and/or the building is demolished. The chemical kitchen area may be remodeled to fit the current occupant's (CPI) uses.

Soil contamination includes TCA up to 130 ppm and DCE up to 15 ppm. Groundwater contamination includes TCA up to 22,000 ppb and DCE up to 3,600 ppb. The groundwater table is approximately 6 to 10 feet below ground surface (bgs). Bay Muds predominate from 4 to 20 feet bgs. Stiff, sandy to silty clay extend from below the Bay Muds to at least 80 feet bgs.

Soil contamination is localized within the chemical kitchen and is limited to a depth of less than 30 feet. All possible VOC sources have been removed. VOCs in soil are degrading naturally and are not present directly beneath the concrete floor.

Groundwater beneath the site is not considered a source of drinking water and remaining VOC concentrations in the soil and groundwater are not a significant treat to water quality. The groundwater is brackish (TDS greater than 3,000 mg/l) and more than 200 gallons per day cannot be extracted. Monitoring shows that groundwater contamination is limited to a depth of less than 30 feet and has not migrated beyond the chemical kitchen. Clay-rich soils limit groundwater movement and little migration is expected.

Recycled Paper

*Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.*

Thursday, July 01, 2004.max

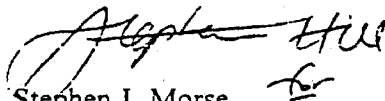
±

Remaining VOCs in soil and groundwater do not pose an unacceptable risk to current and future workers as long as CPI continues to use the area as an industrial manufacturing facility, and if the concrete floor or its equivalent remains. Varian will address potential remediation of the remaining soil and groundwater contamination when the building is removed and/or when there is a change in the actual use of the site.

Please contact Rico Duazo at (510) 286-0837 if you have any questions.

Sincerely,

Loretta K. Barsamian  
Executive Officer

  
Stephen I. Morse  
Chief, Toxics Cleanup Division

cc: Sabrina Mih, San Mateo County DHS  
Leilani Nieves, CPI, Inc.  
Al Wilunowski, CPI, Inc.



*Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.*

Thursday, July 01, 2004.max

**Closure of Sumps SWMU 14 and SWMU 15  
Former Varian Power Grid Tube Products**





# HEALTH SERVICES AGENCY

ENVIRONMENTAL HEALTH SERVICES DIVISION

January 16, 1996

Mr. Michael D. Basel, Ph.D., P.E.  
Montgomery Watson  
365 Lennon Lane  
Walnut Creek, CA 94598-2427

SUBJECT: Closure of sumps SWMU 14 and SWMU 15, Former Varian Power Grid Tube Products, San Carlos, CA

This letter confirms the closure of two concrete lined sumps under the direction of San Mateo County Environmental Health Services at the subject site. Provided that the information submitted to this agency was accurate and representative of existing conditions, it is our position that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present, or future operations at the site. Nor does it relieve you of the responsibility to clean up existing, additional, or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings, or site usage.

Thank you for your cooperation in this matter. I may be reached at (415) 363-4565.

Sincerely,

Teresa Belasco, REHS, MPH  
Hazardous Materials Specialist IV

cc: Bill Lent, Hazardous Materials Program Manager  
Sabrina Mih, Hazardous Materials Specialist, County Remedial Oversight Program

SAN MATEO COUNTY BOARD OF SUPERVISORS

RUBEN BARRALES • MARY GRIFFIN • TOM HUENING • TED LEMPert • MICHAEL D. NEVIN

HEALTH SERVICES AGENCY DIRECTOR  
MARGARET TAYLOR

ENVIRONMENTAL HEALTH SERVICES DIVISION DIRECTOR  
BRIAN ZAMORA, MPH, REHS

590 HAMILTON STREET, REDWOOD CITY, CALIFORNIA 94063

PHONE (415) 363-4305 • TDD (415) 573-3206 • FAX (415) 363-7882

**Approval of RCRA Facility Investigation Report for  
Varian Power Grid Tube Products**



## DEPARTMENT OF TOXIC SUBSTANCES CONTROL

ION 2  
HEINZ AVE., SUITE 200  
BERKELEY, CA 94710-2737

SAN MATEO COUNTY  
ENVIRONMENTAL HEALTH



JUL 17 1995

RECEIVED

July 13, 1995

Mr. Gregory Hall  
Environmental Engineer  
Varian Power Grid Tube Products  
301 Industrial Way  
San Carlos, California 94070

Dear Mr. Hall:

**APPROVAL OF RCRA FACILITY INVESTIGATION REPORT (RFI) FOR VARIAN  
POWER GRID TUBE PRODUCTS, EPA ID No.: CAD 009438300**

The Department of Toxic Substances Control (DTSC) has reviewed the RCRA Facility Investigation Final Report (Report), submitted June 19, 1995, for Varian Power Grid Tube Products (Varian) at 301 Industrial Way in San Carlos. DTSC issued a Hazardous Waste Facility Permit to Varian on February 16, 1995. This permit required Varian to investigate five Solid Waste Management Units (SWMUs) at the site. The RFI Workplan was approved April 5, 1995. The SWMUs required to be investigated were SWMUs 7, 11, 12, 13, and 14. The Report discussed the results of the investigation conducted at Varian and concluded that no further action is needed for SWMUs 7, 11, 12, 13, and 14. DTSC hereby approves the Report and concurs that no further action is needed for SWMUs 7, 11, 12, 13, and 14. Therefore, there is no requirement to proceed onto the next step of the corrective action process which is normally a corrective measures study.

DTSC acknowledges that Varian also is investigating SWMUs 15 and 16 and AOCs 11, 14, and 16 under the supervision of the San Mateo County Department of Health Services. A copy of the final report on these SWMUs and AOCs shall also be submitted to DTSC. DTSC reserves the right to require further investigation of these SWMUs and AOCs if, at any time, DTSC determines that any investigation being conducted does not meet State or federal standards.

Sincerely,

Lester Kaufman, Chief  
Facility Permitting Branch

cc: (See next page)



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**Closure of Former Drum Storage Area and Cleanup of  
Former Solvent Pit and Former Evaporation Ponds**

## DEPARTMENT OF HEALTH SERVICES

2151 BERKELEY WAY  
BERKELEY, CA 94704

(415) 540-2043



August 14, 1985

Mr. Tom Novack  
Varian Eimac Division  
301 Industrial Way  
San Carlos, CA 94070

Dear Mr. Novack:

This letter confirms the discussion and observations of the June 21, 1985 inspection of the Varian - Eimac facility by Elyse Heilshorn of my staff.

The closure of the former drum storage area is approved and considered complete by the Toxic Substances Control Division of the California Department of Health Services (DHS). You may use this area for other facility activities.

The clean-up of the former solvent pit and former evaporation ponds is approved by DHS. Varian may use these areas as deemed appropriate.

The sampling plan for the former wastewater treatment area is approved. Please proceed with the work. Please notify DHS 48 hours prior to sampling.

The expansion of the wastewater treatment facility to include chrome reduction is approved. Please submit any necessary changes in the Operation Plan to reflect changes in operations, clean ups, training, and closure procedures and costs. This information shall be submitted to DHS prior to operating the new treatment system.

Please submit: Photographs of the solvent pit excavation, photos of the closed drum storage area, and copies of the manifests from the excavation as requested during the June 21, 1985 inspection.

If you have any questions, please call Ms. Heilshorn at 540-3052.

Sincerely,

Dwight R. Hoenig, Chief  
North Coast California Section  
Toxic Substances Control Division

**RECEIVED**

AUG 16 1985

**WALLY ORLOW**

EH:rvh

VA-200-030178

**APPENDIX B**  
**LIST OF REPORTS**

**APPENDIX B**  
**List of Reports**

TITLE	AUTHOR	DATE
Geotechnical Investigation Report Varian EIMAC San Carlos	Kleinfelder & Associates	February 1, 1984
Report of Field Investigations-Metal Concentrations in Soils EIMAC Division of Varian Associates	Metcalf & Eddy Engineers	May 5, 1984
Report of Field Investigations-Volatile Organic Chemicals EIMAC Division of Varian Associates	Metcalf & Eddy Engineers	May 5, 1984
Report of Field Investigations-Methanol EIMAC Division of Varian Associates	Metcalf & Eddy Engineers	May 5, 1984
Environmental Investigation Report Varian EIMAC San Carlos	Kleinfelder & Associates	November 1, 1984
Final Report on Soil and Groundwater Contamination Assessment at Varian-EIMAC's Former Methanol Storage Area	Kennedy/Jenks Engineers	March 13, 1985
Final Report on the Assessment of Inorganic and Organic Chemicals in the Soil and Groundwater at Varian-EIMAC's Former Hazardous Waste Drum Storage Yard	Kennedy/Jenks Engineers	April 1, 1985
Remedial Action Activities at the Former Evaporation Ponds and Former Solvent Dry Well Varian-EIMAC	Kennedy/Jenks Engineers	April 22, 1985
Assessment of Chemicals in Soil at the Former Temporary Wastewater Treatment Plant Site	Kennedy/Jenks Engineers	October 1, 1985
Geotechnical Consultant Approval-County of San Mateo	County of San Mateo Dept of Public Works Geotechnical Section	June 26, 1989
Report of Building Survey for Asbestos Containing Materials	Law Associates	June 15, 1990
Revised Partial Closure Certification Report Chrome Reduction Wastewater Treatment Varian EIMAC San Carlos Division	PES Environmental Engineering & Environmental Services	February 12, 1991
Closure Report, Four Plating Areas, Varian Associates	Peregren Environmental Group	August 13, 1992
Phase II Soil Investigation, Former Plating Areas at Varian Associates	Peregren Environmental Group	September 10, 1992
Final Report, Soil Sampling and Analysis, Varian Associates	Peregren Environmental Group	December 12, 1992
Soils and Groundwater Site Assessment Varian-San Carlos	Canonie Environmental	January 8, 1993
Varian Assocs San Carlos Facility Feb 1994 Groundwater Monitoring Event	Woodward-Clyde Consultants	May 19, 1994
RCRA Facility Assessment for Varian Power Grid Tube Products	CA EPA, Dept of Toxic Substances Control Region 2	June 1, 1994
Groundwater Sampling Activities Varian Assocs Power Grid Tube Products Facility	PES Environmental Engineering & Environmental Services	January 13, 1995
Final Area of Potential Interest Investigation Work Plan Varian Power Grid Tube Products	Montgomery Watson	March 1, 1995
Phase I Environmental Site Assessment of Varian Power Grid Tube Products DRAFT FINAL	Montgomery Watson	April 1, 1995

**APPENDIX B**  
**List of Reports**

<b>TITLE</b>	<b>AUTHOR</b>	<b>DATE</b>
Letter to Daniel Peixoto: Environmental Compliance Analysis of Power Grid Tube	Montgomery Watson	April 21, 1995
Final Report of Results RCRA Facility and Phase II Investigations Vol. 1 of 2	Montgomery Watson	April 28, 1995
RCRA Facility Investigation Final Report and Summary Report Varian Power Grid Tube Products	Montgomery Watson	June 1, 1995
RCRA Facility Investigation Final Report and Summary Report Varian Power Grid Tube Products	Montgomery Watson	June 1, 1995
Closure Report for Former Drum Storage Area, Former Chemical Kitchen, Former Ceramics Painting Shop, etc.	Montgomery Watson	June 1, 1995
Due Diligence Assessments Varian EDB Facilities	ICF Kaiser Engineers	August 10, 1995
Compliance Assessment Communications & Power Industries	ICF Kaiser Engineers	January 11, 1996
Final Report of Results Additional Field Investigation Former Varian Power Grid Tube Products	Montgomery Watson	February 1, 1996
Human Health Risk Assessment Former Bldg 2 Drum Storage Area	Montgomery Watson	August 1, 1996
Closure Report of Hazardous Waste Storage Area	Aqua Science Engineers	December 23, 1997
Expanded Phase I Environmental Site Assessment	P & D Consultants	October 6, 2000
Updated Human Health Risk/Remedial Alternatives Evaluation (Letter to Michael Cheng: Updated Human Health Risk)	Montgomery Watson Harza	February 27, 2002
Final Report Asbestos-Containing Materials and Lead Coatings Survey Buildings 1, 2, 3 and 5	Pinnacle Environmental	December 3, 2002
Memo to D. Dixon, Treadwell & Rollo, Data Transmittal for Northgate Investigations at 301 Industrial Rd	Northgate	June 2, 2003



environmental management, inc.

August 25, 2004

Mr. Stephen I. Morse  
Assistant Executive Officer  
San Francisco Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, California 94612

Re: Remedial Action Plan Addendum  
301 Industrial Way  
San Carlos, California  
*Project No.: 1100.03*

Dear Mr. Morse:

Northgate Environmental Management, Inc. (Northgate) is pleased to present this addendum to our June 16, 2004 *Remedial Action Plan, 301 Industrial Way, San Carlos, California*. This addendum has been prepared to address issues discussed with you during the August 11, 2004 meeting regarding the Remedial Action Plan (RAP). The additional information presented includes the following topics:

- Overview of the proposed remedial action process;
- Decision tree for the proposed investigation and remediation activities;
- Confirmation sampling protocols;
- Proposed approach for removal and investigation of underground utilities;
- Proposed approach for the post-remediation risk assessment;
- Post-remediation contingency planning; and
- Proposed schedule for Regional Water Quality Control Board (RWQCB) communications.

Each of these topics is addressed in detail below.

#### **Overview of the Proposed Remedial Action Process**

The proposed remedial action process will begin with the shutdown of the current facility operating at 301 Industrial Road. The facility is currently owned and operated by Communications & Power Industries (CPI). CPI will be responsible for closing down operations, which includes removal of all equipment and hazardous materials stored on site.

CPI will also decontaminate and/or dispose of hazardous building materials/piping (other than to be performed by 301 Industrial LLC as described below). The San Mateo County Department of Environmental Health will oversee this work. Any soil or groundwater remediation required for such closures will be performed under the direction of the RWQCB. Once CPI has completed its shutdown and vacated the facility, only major structures will remain on site. CPI is expected to complete its closure process and vacate the site in 30 months or less.

Once CPI has vacated the site, 301 Industrial LLC will then clear the buildings and structures of asbestos containing materials (ACMs) and other remaining hazardous materials (e.g., mercury switches, fluorescent light tubes and ballasts, etc.). During this time, site features will be surveyed, as necessary, to provide an accurate site map for future sampling and remediation activities. The buildings will then be demolished. All foundations and surface-grade structures will also be removed. The parking area at the southern/southeastern area of the site will likely be retained at this time as a staging area, but will later be removed. This process is anticipated to require approximately 6 months. Approximately 60 days before commencement of demolition activities at the site, 301 Industrial LLC will submit a Field Sampling Plan (FSP) and Health and Safety Plan (HSP) to the RWQCB for review and approval.

After the site areas are cleared of buildings and structures, all of the known contaminated soil and groundwater will be remediated. It is anticipated that some overlap will occur between work on different areas of the site. The order in which areas of the site will be addressed depends on logistical considerations to be identified in the field. Waste soil and water requiring off-site disposal will be temporarily stored on-site and hauled away incrementally, although the number of waste-hauling events will be scheduled to reduce the impact on local traffic. This process is anticipated to require approximately 14 months.

Once remedial activities have been completed, all contractors and equipment will be demobilized and, following RWQCB approval, areas of the site may be rough graded in anticipation of future construction activities.

### **Decision Tree for the Proposed Investigation and Remediation Activities**

Figure 1 incorporates the complete investigation and remediation decision tree process.

### **Confirmation Sampling Protocols**

The confirmation sampling protocols are also shown in the attached investigation and remediation decision tree process figure (Figure 1). Additional information regarding confirmation sampling protocols will be presented in the FSP, which will include both a Sampling and Analysis Plan (SAP) and a Quality Assurance Project Plan (QAPP). All data screened against remedial goals to confirm site cleanup will be produced by a certified mobile and/or fixed laboratory.



### **Proposed Approach for Removal and Investigation of Underground Utilities**

All underground utilities on site will be identified, closed, and removed during the investigation and remediation process by 301 Industrial LLC. In addition, all backfill surrounding the utilities will also be removed. As utilities are removed, the trenches will be inspected for potential contamination issues. If a utility passes through a remediation zone or shows signs of potential contamination, the utility trench and related backfill will be handled and investigated per the remedial approach discussed in Section 5 of the RAP.

### **Proposed Approach for the Post-Remediation Risk Assessment**

Once remediation of the site has been completed, a human health risk assessment (HHRA) will be performed for the entire site by qualified and experienced risk assessment professionals. This HHRA will be performed based upon data that reflects the then current conditions at the site (viz. confirmation samples of soil, soil gas, and groundwater representing media that have not been removed). The HHRA will be conducted in accordance with the *Risk Assessment Guidance for Superfund Human Health Evaluation Manual* (EPA/540/1-89/002) considering a scenario for unrestricted use. It will include both an assessment of current site conditions and an assessment of future site conditions once the site has been redeveloped. Prior to preparing the HHRA, the detailed scope of the assessment will be discussed with the RWQCB in a meeting once remedial activities are largely completed.

### **Post-Remediation Contingency Planning**

Although it is not anticipated, given the extensive historic research and field sampling that has been completed, there is a small possibility that once remedial activities are completed at the site and the RWQCB has issued a No Further Action letter, previously unidentified area(s) of contamination could be discovered, especially during the construction phase which will immediately follow remediation. If this occurs, construction work in the immediate vicinity of the potentially affected area will be halted as soon as the potential contamination is identified and the area will be investigated and remediated consistent with the RAP. This is defined as "contingency work." During any contingency work, the RWQCB will receive periodic updates; a completion report for the contingency area will be submitted to and approved by the RWQCB. In addition, if contamination in the contingency area has the potential to impact the HHRA, an addendum to the HHRA will be prepared to address the affected area.

### **Proposed Schedule for RWQCB Communications**

During the current facility closure process, quarterly updates will be provided to the RWQCB. Once the facility is ready for commencement of building demolition, a schedule with milestones will be submitted to the RWQCB. This schedule will serve as a launching point for establishing a communication schedule and protocols for the investigation and remediation phase of the project.



## CLOSING

We hope this addendum has provided sufficient clarification on the issues discussed at the August 10, 2004, meeting. If you should have any questions or require additional information, please feel free to contact either of the undersigned.

Sincerely,

**Northgate Environmental Management, Inc.**



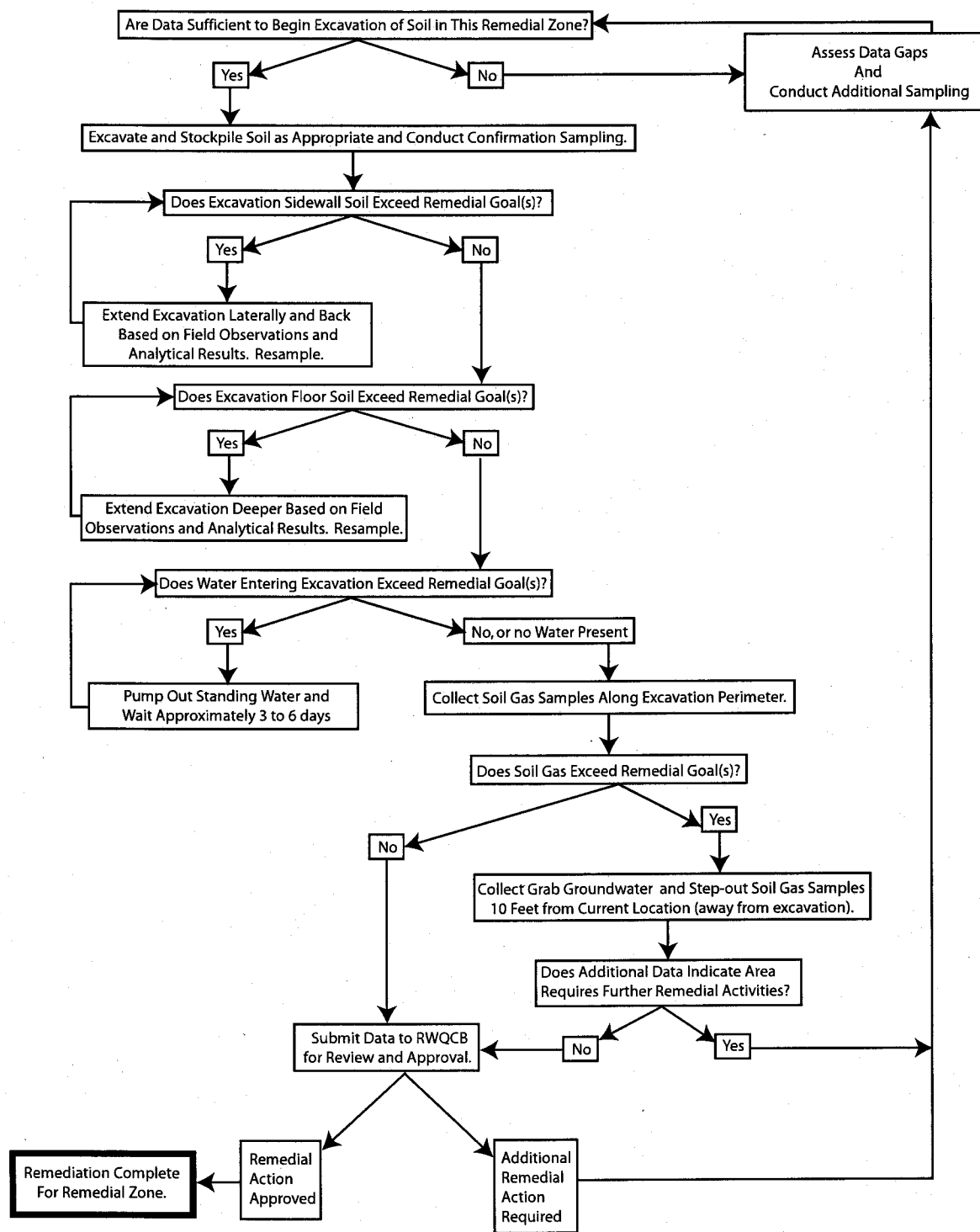
Alan Leavitt, P.E.  
Principal



James Schwartz, R.G.  
Senior Project Geologist

Attachments  
Figure 1 – Decision Tree





**FIGURE 1  
DECISION TREE**

Remedial Action Plan Addendum  
301 Industrial Way  
Palo Alto, California  
August 2004

**California Regional Water Quality Control Board  
San Francisco Bay Region**

**Exhibit C to Mutual Release Attachment to Resolution No. R2-2004-0087**

**Written Instrument Of Release And Transfer Document**

\_\_\_\_\_ [name of new purchaser, lender, lessee, or occupant] (hereinafter "Released Party"), by signing below verifies and warrants as follows:

1. Released Party has read the recorded Mutual Release and Covenant Not to Sue ("Mutual Release") document, and the related Regional Water Quality Control Board (Regional Board) Resolution No. R2-2004-XXXX, including Attachment and Exhibits recorded in Book \_\_\_\_\_, Page \_\_\_\_\_ in San Mateo County, California for the "Property" located at 301 Industrial Way in the City of San Carlos, San Mateo County, California.
2. Released Party understands and agrees that the Mutual Release contains a release by the Regional Water Quality Control Board ("Regional Board") and a covenant not to bring or support any action or order against subsequent purchasers, tenants, lenders, and occupants of all or a portion of the Property (as defined in the Mutual Release), including their directors, officers, shareholders, managers, employees, partners, affiliates, members, contractors, agents, successors, and assigns, related to the Known Conditions (as defined in the Mutual Release), including contamination at, under, or originating from the Property (as defined in the Mutual Release).
3. Released Party understands and agrees that it may enjoy the benefits of the Mutual Release only if it releases and covenants not to sue the Regional Board as set forth in the Mutual Release, and that by executing this Release, Released Party releases and covenants not to sue the Regional Board in accordance with the terms of the Mutual Release.
4. Released Party understands and agrees that its right to rely on the benefits of the Mutual Release is subject to and conditioned on its own, but only its own, acceptance of all of the provisions of the Mutual Release and its compliance with its obligations under the terms of the Mutual Release.
5. Released Party accepts and agrees to abide by all provisions of the Mutual Release.

This Instrument of Release and Transfer Document shall be effective upon execution by the Released Party. Within three days of execution, Released Party agrees to mail a copy of the executed Release to: Executive Officer, Regional Water Quality Control Board, San Francisco Bay Region (address as of October 20, 2004, is 1515 Clay Street, Suite 1400, Oakland, CA 94612).

\_\_\_\_\_  
Authorized Signature (Released Party)

\_\_\_\_\_  
Date

Name/Title: \_\_\_\_\_

Company Name/Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_